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THE

EDINBURGH MEDICAL AND SURGICAL JOURNAL:

EXHIBITING

A CONCISE VIEW

OF THE

LATEST AND MOST IMPORTANT DISCOVERIES

IN

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VOLUME NINTH.

1813.

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1813.

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THE

EDINBURGH
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1. JANUARY 1813.

PART I.

ORIGINAL COMMUNICATIONS.

I.

Case of Congenital Cataract; with some Observations on the Means of artificially Dilating the Pupil in the Operations of Extracting and Depressing the Cataract. By JOHN HENRY WISHART, Esq. Fellow of the Royal College of Surgeons, Edinburgh.

JAMES DRYSDALE, a boy about eight years of age, was brought to me from Kinross, on the 1st October, with cataract in both eyes. The pupils contracted and dilated very readily; he was able to distinguish day from night; and if the hand or any opake body was held above and before his eyes, he immediately put his hand to it; but he was unable to see any object placed before him, or under his eyes. On dilating the pupils by the application of the solution of the extract of hyoscyamus, the cataract of the left eye was observed to be of an uniform dusky grey colour; that of the right had a ground of the same colour, but several small angular spots were perceived in it of a bright white colour.

From the history of this case, which I received from Mr Annan, surgeon at Kinross, it appeared very probable, that, if the boy was not absolutely born blind, he had lost his sight a few days after birth. It was very soon observed, that there was something remarkable about the child's eyes; it was likewise noticed, that the child did not close the eyelids, even when exposed to the bright light of the sun. The child was about four months old, when it was positively ascertained that he was blind. There was evidently a great deficiency in intellectual faculties; but it was difficult to decide, whether it was such as to prevent him gaining his bread, provided his sight was restored. His education had been totally neglected, and he spoke very indistinctly. He was very averse to allow his eyes to be touched, and expressed scarcely any anxiety for the restoration of his sight.

Under these circumstances, I resolved to try the effect of the operation for removing the cataracts, and it was performed on the 4th of October, assisted by Dr Duncan, jun. Mr Nasmyth, &c. Very great difficulty was met with in securing the patient. The pupils having been previously dilated by the solution of the hyoscyamus, and aware, from the appearances described, that I had a capsular cataract to operate on in the right eye, and a soft one in the left, I used a needle similar to that of Professor Scarpa, but with a smaller curvature at the point, and made very fine and slender. The lens in the left eye was found to be of a melicerous appearance, was readily broken down, and several of the opake flakes passed into the anterior chamber of the aqueous humour. The cataract of the right eye was purely capsular. On being pierced with the needle, there appeared as if a thin vapour had passed before the pupil; and when the more dense parts were separated as much as possible, the pupil became almost clear. The eyes were covered with a few folds of wet lint, and a pledget of linen, spread with simple ointment, was applied over it, and secured with a single turn of a roller round the head; and he was put to bed.

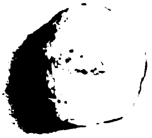
5th.—Slept almost all the afternoon, and made no complaint, and has had a good night. Pulse 96; skin rather hot. The eyes were bathed with warm water: the lids adhered slightly. In the morning, while eating his breakfast, said he could see light. On attempting to open the eyes, he resisted so strongly that I thought it prudent to desist. The lint was removed, and the eyes were covered with a compress.

Hab. stat. pulv. jalap. gr. xii.

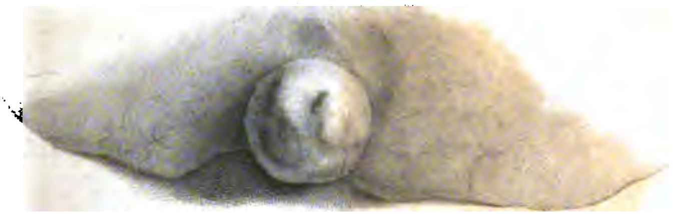
6th.—Powder operated well; skin cool, pulse natural. After bathing the eyelids with warm water they were opened. The pupil of the right eye is nearly clear, except a very small speck at the under part; the pupil of the left eye is full of opake fragments floating about. There is slight redness of the conjunctiva, and some ecchymosis at the place of the puncture of the needle.

7th.—The pupil of the right eye still continues clear: that of the left improving. Both eyes are very tender on exposure to

Section of an Albuminous Concretion of the Pleura.



External form of the Concretion.



Drawn by J. Wardrop. Published by A. Constable & C.º Edinburgh Dec. 31. 1811. Engraved by [illegible]

light, but not painful. Last night fell a crying on being left in the room without a light.

8th.—Yesterday evening complained of headach. This morning both eyes were found to be inflamed, especially the right. They are rather more sensible to the light than before, but says they are not painful. He was ordered a repetition of the laxative, and to have the eyes bathed with a collyrium of a grain of the muriate of mercury in six ounces of water, with a drachm of the vinum opii, to be used a little warm.

9th.—Inflammation of both eyes much abated, and he opens them very readily to day. The pupil of the right eye is perfectly clear; that of the left is becoming clearer at the upper part. Cont. collyr.

13th.—Right eye nearly free from inflammation; the pupil of the left eye much clearer.

From this date the left eye gradually improved, and, by the 6th November, when he was sent home, more than one half of the pupil was quite clear, and he saw tolerably well with it. Both eyes had lost, in a considerable degree, the rolling motion; but, from the mental defect already noticed, it was difficult to ascertain the exact state of his sight. However, he seemed highly delighted on being dressed in a new suit of clothes. It may be further mentioned, that his father is said to be in a state approaching to idiotism.

In speaking of the dilating the pupil, previous to the operation, I mentioned that I had used the solution of the extract of hyoscyamus, and not the belladonna, which is now so generally used in this country for that purpose. The singular property possessed by these narcotics has been long known on the Continent, and in this country was first used in the operation for cataract by the late Mr Saunders. Van Swieten, * speaking of palsies brought on by exposure to the vapours of arsenic, mercury, &c. remarks, that there are other poisons which may produce the disease even externally applied, and relates the following case: "A lady of quality applied a little bit of a fresh leaf of that kind of nightshade which is commonly called *Belladonna*, to a small ulcer below her eye, which was suspected to be cancerous, and, in a night's time, the pupil of the eye lost all its motion, remaining quite dilated, even while the eye was exposed to a strong light; but the nightshade being removed, the motion of the pupil gradually returned." Ray † affirms that he saw this case, and that it did not happen accidentally: for

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[*] Commentaries on the Aphorisms of Boerhaave, Vol. X. § 1060.

[†] Histor. Plantar. L. xiii. c. 23. p. 680.

three different times, on repeating the application of the nightshade, the same effect constantly followed. Galen * asserts, that he has frequently observed the same bad effect from the imprudent use of opium, mandrake and henbane, to relieve violent pains in the eye; and more modern authors mention cases of blindness, squinting, weakness of sight, produced by the application of stramonium, mandrake, aconite, cicuta, &c. A very remarkable case is related by Dr Daries, in his inaugural dissertation De Atropa Belladonna. † In preparing some extract of this herb for Reimarus of Hamburgh, and bruising the recent plant with the flowers and fruit, a drop of the herb or of the succulent berry spirted into his right eye. He endeavoured to remove the slight irritation by rubbing his eye. In three minutes, on the uneasiness going off, a slight dimness of sight was observed, which increased rapidly, and in a quarter of an hour complete blindness came on, without any pain, the other eye remaining sound. Being very much alarmed, he consulted Reimarus about his case, and after three weeks the sight was completely restored. But Reimarus's account of the case, and his inferences from it, will be more satisfactory. " Quod attinet ad oculum tuum, olim, inter conscindendam *Atropæ Belladonnæ* herbam, ita affectum, ut per aliquod tempus fere visu privaretur, probe memini. Deprehendi nempe iridem ejus oculi adeo resolutam et patentem, ut fere dimidiæ tantum lineæ latitudo ambitus superesset, ampla vero choroideæ nigrities transparet. Jam, cum effectum similem ab ore assumta *Belladonna* observari nossem, non dubitavi, quod ipse tu quoque suspicatus fueras, externe applicatum venenum idem efficere posse et ab insperso inter parandum succo paralysin illam ortam, quam tamen duraturam haud esse speravi. Interius jam acetum quoddam concentratum assumpseras, in cujus usu pergendum esse ratus sum: suasi tantum, ut simul ad irritandos nervos exterius volatilis oleosi spiritus vapores oculo ægro admitterentur. Sive igitur sponte, seu his adjuvantibus medicamentis, factum est, ut sensim et visus oculo et contractio pupillæ redirent.—Ego vero mecum reputans, istam *Belladonnæ* vim haud spernendo in chirurgia usui esse posse cogito. Nempe cum in excidenda lente crystallina, sicut pelluciditatem amiserit, haud leve impedimentum objiciat irritatio et contractio nimia pupillæ, adeo ut sæpe iris per educendam lentem laceretur; quidni succo *Belladonnæ*, paralysin illi innocuum per aliquod tempus inducimus? nec solum extractio lentis inde longe facilior obtineretur, sed et simul illud incommodi, ne oculus repentino lucis sensu læderetur."

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* Method. Medendi, L. iii. c. 2.

† Sylloge selectorum opusculorum argumenti Med. Practici, collegit et edidit E. G. Baldinger, Vol. II. 8vo. Gottingæ, 1777.

As far as I have been able to learn, Reimarus was the first who proposed using the belladonna in the operation for extracting the cataract, * and in the *Memoires de la Societé Philomathique* for the year 1797, he mentions, that Dr Grasmeyer of Hamburgh employed it with success; and I have been informed by my friend Dr Duncan junior, that, in the year 1796, he was carried by Reimarus to see Dr Grasmeyer operate on a case of cataract where the belladonna had been previously applied.

Hitherto I have chiefly noticed the use of the belladonna in dilating the pupil; I shall now relate various experiments made with the extract of hyoscyamus, as also a few comparative trials made with these two narcotics. Professor Himly of Göttingen † accidentally learnt the effect of the local application of the hyoscyamus, and recommended its use in the treatment of some diseases of the eye. After the application of a collyrium of a solution of the extract of hyoscyamus, he found the eye exactly in the same state as in a case of complete amaurosis, viz. the iris quite motionless, so far drawn back that it formed a ring scarcely a line in breadth, with its inner edge turned a little backwards, so that its anterior surface was concave towards the central point; the pigmentum nigrum, at the bottom of the eye, had not its usual black colour, but a greyish appearance. The patient, notwithstanding, saw as well with this eye as before, except that there was something glimmering before it. Very soon after rubbing a little of the ol. cajeputi on the eyebrow, the pupil appeared beginning to contract, and the dilatation in a few hours was completely gone. That this effect follows in all cases, he completely proved by various experiments. He uses a solution of a drachm of the extract in an ounce of water, of which he lets a few drops fall into the eye, and keeps it there a short time by bending the head backwards. It occasions no pain, and no perceptible redness. The paralysis of the pupil comes on in an hour and continues five or six hours. As the action of a small quantity of the extract applied topically is so powerful, and so entirely local that only the iris is affected, and not the retina at the same time, he is led to point out the uses which the practical oculist may derive from this fact.

1*st*, The application of this remedy in cataract, affords a certain test whether it adheres to the iris or not. For, by using the hyoscyamus we can make the examination with much greater accuracy than by the former mode of opening and shutting the eye; because in the latter way we must examine quickly, and in a dull light, whereas, by using the hyoscyamus, we may do it with the greatest deliberation, and in the brightest light.

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* This proposal of Reimarus is also noticed in Dr Underwood's Treatise on the Diseases of Children, Vol. II. p. 53.

† Ophthalmalogische Beobachtungen und Untersuchungen, St. I. Bremen, 1801.

2dly, The application of this extract enables us to make the most accurate investigation of the nature of the cataract, as it may thus be examined to its utmost extent and in the clearest light. It also assists us in the diagnosis of the capsular and lenticular cataract of the fluid and firm cataract. It also appeared to Professor Himly to be of service in a still more important point of the diagnosis. For experience has taught him, that the patient affected with cataract, seeing coloured points and bodies, does not always make the prognosis of the operation so serious as was formerly supposed: for this does not always arise from a defect of the retina, but sometimes from the nature of the opake lens. If these appearances arose from a particular refraction in the lens itself, then they would be diminished by the dilatation of the pupil, as the rays of light would be transmitted not only by the nucleus of the cataract, but also by its more transparent part: if, on the other hand, they proceeded from a disease of the retina, the dilatation of the pupil would not lessen them, but rather increase their number, as more light would then be transmitted to the retina.

3dly, It proves a palliative remedy in common cataract; as, by its local application, we can produce that state of the iris most favourable for the vision of such patients in a greater degree, and in the bright light of day. But he is unable as yet to decide whether it may be applied so constantly, and so frequently repeated, as to make the dilatation of the pupil permanent, at least during the day, without being hurtful, as he has never used it so constantly. The iris might be for ever deprived of its contractile power, and a *mydriasis ex consuetudine* produced, which would be very hurtful in the event of an operation for extraction being to be performed. On the other hand, in patients who could not bring themselves to have the operation performed, or in whom it was inadmissible, this paralysis of the pupil, by the continued use of the remedy, would be very desirable. Farther, perhaps, from its constant use, its action might extend deeper in the eye, even to the retina, and thus not only a paralysis of the pupil, but even an amaurosis might arise; although this is not so likely to happen from the weaker hyoscyamus, as from the more violent remedies, the belladonna, laurocerasus, &c. But if we should not wish to employ the hyoscyamus so often as to keep the pupil constantly dilated, or if, from its repeated application, we were afraid of an incipient paralysis, there may be situations in the case of blind persons, in which it would be of very great importance to them to see clearly for a few hours, or even a few minutes.

4thly, This remedy procures vision in many cases of opacities of the cornea; as when the opacity is chiefly situated immediately before the pupil, and prevents the rays of light from falling on the retina, although the cornea is sound in other places. The hyoscyamus here forms an artificial pupil without an operation, by enlarging the pupil, and allowing the entrance of the rays of light at the side of the opacity.

5thly, In many cases the application of the hyoscyamus facilitates the operation for cataract; when, for instance, even after a sufficiently large incision, the cataract does not pass out, from the pupil being too much contracted, and remaining so, though the eye be left at perfect rest. In this case, however, he recommends the precaution of not operating during the greatest dilatation of the pupil, as there would be great danger of causing a prolapsus of the vitreous humour, as it would receive too little support from the iris. He therefore allows the greatest effect to be over, and operates when the pupil has already contracted, and the iris acquired a slight degree of motion. The application of the hyoscyamus will also prove beneficial, if we operate according to Beer's method,[*] as the cataract, passing out along with its capsule, requires greater yielding of the pupil; and if partial adhesions of the iris to the capsule are to be separated, the wider the pupil, the more safely can the necessary means be used for their separation; and likewise, if the capsule is opake, it can be more completely destroyed if the pupil be previously in a state of dilatation; and the danger of wounding the iris with the knife, in a case of a very flat cornea, would thereby probably be diminished.

6thly, The dilatation of the pupil by the hyoscyamus, would be of great use in Conradi's[†] method of effecting the absorption of the cataract by opening the capsule; as, in this case, the success depends entirely on the free access given to the aqueous humour to the lens,—consequently, the capsule must not be opened merely in one small point, but a large incision must be made in it, which can be readily done if the pupil be previously dilated.

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[*] This mode is very accurately described in the Encyclopædia Britannica, article Surgery.

[†] From the well known fact of the crystalline lens being often gradually absorbed, whether it be of a hard or soft consistence, if the capsule is opened, and the humours allowed to come into free contact with it, Conradi was led to propose the following simple operation. " A small lancet shaped cataract needle is introduced through the cornea, exactly as the knife in extraction, only a very little farther distant from the iris. The point is passed through the pupil; and when the capsule is sufficiently opened, the needle is withdrawn from the eye, which is bound up loosely for two or three days, as in general, after that time, so slight a wound of the cornea is quite imperceptible, and then we wait for the absorption of the cataract. The

Lastly, The local application of the hyoscyamus is particularly useful in the contraction of the pupil, which is not accompanied by an adhesion of the iris to the capsule.

In calling this state of the iris a paralysis, Himly wishes to be understood to mean nothing further than that the stimulus of light is then incapable of exciting the usual motion, which it was enabled to produce only a short time before, and which is not prevented by adhesion to the capsule, or other morbid affections of the iris.

Soon after the publication of Professor Himly's observations, his work was translated into French, but, by a mistake of the translator, *hyoscyamus* was rendered *belladonna*, and in consequence of that error, various experiments were made in Paris with the latter substance. Dubois employed it in the clinical school on a patient who had a very small pupil. The lens passed out with the greatest ease, and he did not find Himly's caution necessary respecting the danger of a prolapsus of the vitreous humour. In his experiment, the pupil contracted immediately after the lens had passed out.

The late Professor Schmidt of Vienna made various experiments, both with the hyoscyamus and belladonna, externally and internally. He found that the dilatation of the pupil does not take place in every case, though he was unable, from the small number of his experiments, to decide in what cases it takes place, and from what cause this difference arises. The death of that eminent oculist has prevented the prosecution of these investiga-

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needle does not require to be quite so long as Richter's cataract knife, and it should not be more than a line and a half, or two lines in breadth. Its thickness should be very small, merely to give the blade a sufficient degree of firmness; it must be sharp on both sides for nearly one-half of its length." Conradi adds, " It is unnecessary to dwell on the evident advantages of this operation; it is much more easily performed than any other. From this very slight and trifling wound of the insensible cornea, no bad symptoms are to be dreaded, which partly occur during extraction and depression, partly follow after these operations. If, after eight or twelve weeks, the cataract is not absorbed, any other operation may be performed as easily as if this puncture had not been made. The patients have lost nothing but the time; and as they have in general been many years blind, it is not of much consequence, a few weeks, more or less, in order to make the trial of freeing them from their disease by a safe and easy method."—See Arnemann's Magazin für die Wundarzneiwissenschaft, B. 1. St. 1. Göttingen, 1797.

tions; but I have been enabled to collect the following account of some of his experiments.

In the month of May 1803 he operated on twenty-nine patients of both sexes, affected with cataract, in the general hospital at Vienna; on twenty eyes by extraction, and twenty-two by depression of the lens. Of these twenty-nine persons, twenty-six recovered their sight. Eight were selected as the subject of his experiments. In five he tried the application of the solution of the hyoscyamus four hours before the operation; in three he used the inspissated juice of the leaves of the belladonna as many hours before the operation. The phenomenon of the retraction of the iris (dilatation of the pupil) occurred in all the eight patients, but the degree of the dilatation was different in each individual. The difference of age and sex had no influence on it.

Of these eight patients, he operated on three eyes with the couching-needle, through the sclerotic and choroid coats, and six by extraction through the cornea. Of the three that were couched, in a woman the iris expanded completely during the puncturing with the needle, and the pupil assumed its smallest dimensions. Of the six operated on by extraction, the same phenomenon was observed in one woman and one man; and in two others, the expansion of the iris evidently took place, but was not complete. To one of these three, where the complete expansion of the iris came on during the incision of the cornea, the belladonna was applied. Of these nine cases, only one was attacked with iritis after extraction, and consequent closure of the pupil.

Of the twenty-two eyes operated on by extraction, there were only two where the cataract was followed by a slight effusion of the vitreous humour; and this only occurred in the eyes subjected to experiment. It ought also to be observed, that this protrusion of the vitreous humour occurred without any strong pressure having been applied to the eye-ball; that the cataract was purely lenticular, and there was no unusual adhesion of the capsule; and lastly, in both cases, the belladonna had been used. Professor Schmidt lastly remarks, that, in all the six patients, it appeared to him as if the cataract was more *unwilling* to come out, (if the expression may be allowed); and that he was convinced, that neither the size of the incision, nor of the opening of the capsule, nor any sort of adhesion, could have the most distant share in producing this circumstance. †

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† See Ophthalmalogische Bibliothek von Himly und Schmidt, St. 11. B. 1. Jena, 1803.

I have been induced to give very copious extracts from these works, on account of the difficulty of procuring them, and the importance of the information to the practical surgeon which they contain. Of late, I have generally used the solution of hyoscyamus in preference to the belladonna, as, in some cases of acute inflammation of the eye, the belladonna seemed to excite pain. In one case of cataract, I have occasionally used the hyoscyamus as a palliative cure for more than a twelvemonth, and have not observed any bad effects from its continued application. However beneficial the dilatation of the pupil may be in the operation of depression, or of breaking down the lens in congenital cataract, it does not appear to me that it would be equally so in the operation of extraction. For I have always found that the incision of the cornea was made with less risk of wounding the iris, when the pupil was contracted; and I have never met with any difficulty in getting out the cataract, by a gradual and continued pressure on the eye. The iris being expanded, would bring it immediately under the edge of the knife, and make it more apt to be wounded, or it might fall forward after the knife had cut itself out, an accident which happened in two cases where I operated, but was not attended with any bad consequence. In these two cases, I found the application of the hyoscyamus of great use in drawing the iris back into the eye from between the edges of the wound, which then healed, and both patients now enjoy very perfect vision. I have also used it in cases of protrusion of the iris through ulcers of the cornea, the iris retracting, and allowing the ulcer to cicatrize. I very lately also used it with singular advantage in the following case. A woman about forty came to me with the pupils of both eyes very much contracted, the iris adhering firmly to an opake substance behind; but the opening was so small as to make it impossible to ascertain the nature of the opacity. She had lost the sight of the left eye for nearly five years; and the vision of the right was much impaired. In both eyes the affection came on subsequent to violent rheumatic attacks in the head and neck. I conceived, that if the hyoscyamus was applied to the eye, and the adhesions separated, the pupil would dilate. Accordingly, I applied the solution an hour before, and then introduced the curved cataract needle, about two lines behind the cornea. As soon as the adhesions towards the inner angle of the eye were separated, the pupil sensibly dilated, and the point of the needle was seen more distinctly behind it, and was moved about with more freedom, in order to separate the rest of the adhesions. After the operation, the patient could distinguish the wall of the room.

I have always used the hyoscyamus dissolved in water, in the proportion of a drachm to the ounce. In Drysdale's case I tried the extract merely softened with water, but did not find that it occasioned a greater dilatation than the solution. The difficulty of procuring the belladonna, may also be mentioned as a reason for recommending the hyoscyamus. I lately applied to two of the principal apothecaries here, and could not get any of the recently prepared extract.

Edinburgh, *November* 1812.

II.

Dissection of an Albuminous Concretion which was found in the Cavity of the Thorax, loosely adhering to the Pleura Pulmonalis; with some Observations on the Diseases of the Serous and Synovial Membranes. By JAMES WARDROP, Esq. Surgeon, London.

IN a former Number of this Journal, (see Vol. IV. p. 421.), I related two cases, in which loose cartilaginous-looking substances were found floating in the cavity of the vaginal coat of the testicle, a disease which seemed to have been overlooked by surgeons, but which appeared to me to merit their attention, as well as that of pathologists. Since these observations were published, I have had opportunities of examining a considerable number of similar examples; and the case which I am now about to describe, affords another additional and beautiful illustration of an analogy in the diseases of serous and synovial membranes.

On opening the cavity of the thorax of an adult, the lungs collapsed, and were apparently quite sound, except in one part of the left lobe, where a whitish tumor was observed, loosely adhering to the pleura.

On carefully examining this substance, it very much resembled a piece of cartilage, in colour, transparency, elasticity, and firmness. Its size was that of a Spanish hazel-nut; its form globular in some places, being slightly flattened, with its surface smooth and glossy. It adhered to the pleura of the lung only in a few points, the adhesion being formed of thin white membranous bands. The adjacent lung was quite sound. (See plate.)

On dividing this substance, it gave a resistance to the knife precisely like common cartilage; and the section showed it to be composed of a number of concentric laminæ, surrounding an osseous central portion. The bony nucleus was small, very brittle, of a dark brown colour, and composed, like the cartilaginous exterior, of concentric layers. (See plate.)

Whilst very important advantages are derived from a knowledge of general anatomy, in all pathological inquiries, accurate pathological observations are equally valuable in establishing analogies in natural structure. On this account, the case which has now been related becomes more particularly worthy of notice.

Concretions of a similar description have been found adhering to the synovial membrane, or floating in the different synovial cavities, more especially in the knee-joint. They have been described as adhering to, or floating in the cavity of the vaginal coat of the testicle; and I have a preparation where small pendulous masses of a similar description are attached to the dura mater. All the membranes, too, belonging to these two classes, undergo the same changes when they are inflamed. They become thickened; lose their natural transparency; lymph is effused on their internal surfaces; and it occasionally happens that contiguous portions of these surfaces form adhesions, the adhesions sometimes, though rarely, being converted into bone. In both classes of membranes, the fluid which they exhale is sometimes collected to a morbid degree, producing the dropsy of joints, hydrothorax, ascites, hydrocele, hydrocephalus. They both, also, under certain states of inflammation, secrete a purulent fluid, without any destruction of surface.

With regard to the process whereby these concretions are formed in the serous cavities, and in joints, and the peculiar circumstances under which that morbid change takes place, much has not yet been satisfactorily ascertained.

From the cartilaginous, and in many instances osseous structure of the concretions found in joints, some have conceived them to be a growth or elongation of the cartilage and bones which form the natural joint; whereas others have supposed that they were formed by a deposition from the synovial fluid, similar to what takes place from the urine or the bile, when calculi are formed within the bladder of urine or gall-bladder. Both these opinions can be satisfactorily refuted.

The frequent formation of cartilaginous and osseous substances in various organs, at a distance and unconnected with any of the natural bones, is sufficient to prove that the concretions of joints may be formed, independent of any adjacent cartilaginous or osseous structure. The formation of similar concretions in serous cavities, proves, beyond dispute, the fallacy of such an opinion.

But it is still more improbable, that such concretions are formed by any deposit or decomposition of the synovial fluid, or of that fluid which moistens serous cavities. The distinct characters of organization which the concretions possess, in all the different states in which they are found, refutes such an hypothesis.

If we take but a general view of the morbid change to which the organs of the human body are liable, we observe, that the various natural textures of which these organs are composed, are all occasionally developed, in situations where no such texture naturally exists. We occasionally meet with bone, cartilage, fat, a serous or synovial cavity, or a mucous canal, where none of these are naturally to be found. That a cartilaginous or osseous mass should be formed by a synovial or a serous membrane, is therefore quite competent with the ordinary phenomena of disease.

It is very probable that the membrane lining those cavities in which the concretions are formed, has been at one period or another affected with inflammation. When a serous or synovial membrane becomes inflamed, in place of mere exhalation which is naturally going on, a distinct quantity of fluid is collected, from which albuminous deposit is formed. In most instances this albuminous matter is re-absorbed; but when a portion remains, it acquires a very considerable degree of firmness, as we observe in adhesions formed by the pleura and peritonæum converted into bone. If a piece of albumen be in this manner left loosely attached to the membrane, and if a quantity of fluid be at the same time collected in the cavity, the albumen will be modelled into a particular shape, from the motion and pressure to which it is exposed. Whilst the albumen remains attached, it may thus undergo various changes in form; and any fresh attack of inflammation, however slight, may add to its bulk: But when it is once detached, by its slender peduncle giving way, no future change can take place, unless that of absorption; for, when loose and unconnected, it must be considered as separated from the system, and liable to be acted on by the absorbents as a foreign substance. It has been briefly noticed, that these concretions are either entirely composed of a soft substance, or of a substance partly soft and partly osseous; or they are altogether composed of bone. The same may be noticed of the common adhesions formed between serous and synovial membranes, and of the changes which those membranes themselves undergo from chronic inflammation. These too are sometimes merely ligamentous, but in other instances they are ossified; thus showing, that adhesions and concretions ought to be considered as the effect of the same morbid action, and merely varieties of disease, in place of distinct morbid alterations of structure.

As a considerable quantity of albumen enters into the composition of the fluid exhaled into serous and synovial cavities; and as the adhesions which form in them are chiefly albuminous, I have denominated the substances which have now been described, *the "Albuminous Concretions of Serous and Synovial Cavities."*

London, October 1812.

III.

Case of Hernia Cerebri, attended by Edwards and Pring; communicated by Daniel Pring, Member of the Royal College of Surgeons, London.

On the 6th of April we were requested to visit —— Shell of Batheaston, near Bath, who had, about a week previous to this his first application for advice, sustained an injury of the head.

In the act of firing off a gun, the fastenings of which were not properly secured, the barrel flew from the stock, and he received, in consequence, a violent blow on the forehead. On examination, seven days after the accident, I found a small and ill-conditioned wound in the integuments, about an inch and a half above the superciliary ridge. The appearance of the wound was sloughy; the circumference was raised and detached from its adhesion to the skull; the edges were in some measure everted; and there followed, upon the removal of the handkerchief, a copious effusion of sanious matter.

On passing a probe into the wound, I felt some spicula of bone; and, by insinuating the extremity between these fragments (which seemed ready to yield to the slightest touch), I found, that the instrument might, with very little pressure, be passed into the cavity of the cranium. The man retained his perfect sensibility, and in this particular had hitherto suffered no derangement. The day preceding my visit to him, he had been affected with nausea and vomiting, but not to any great degree. He complained principally of great prostration of strength; his pulse was not more than fifty, soft, and extremely low. In short, as the functions of the brain had sustained no derangement, and the most direct debility prevailed, both in the voluntary powers and in the action of the heart and arteries, and as he had had no evacuation from the bowels in the three preceding days, I contented myself with dressing the wound lightly, and ordering him some cathartic medicine; not thinking it prudent, under the present circumstances of the case, to adopt any measures for a more decided depletion.

The next day I saw our patient in company with Mr Edwards, my partner. The cathartic medicines appeared to have done their duty: and, excepting that the slight sensation of numbness was removed, which he had complained of the day before, his symptoms and condition had undergone little or no change. The same extreme debility obtained; and as he had lost much blood at the time of the accident, from the laceration of the superciliary, and perhaps some of the branches of the temporal, artery, (which loss was sufficiently indicated by the depression of the pulse), we did not think it advisable to take from him any additional quantity.

The condition of our patient remained *in statu quo* for the four or five subsequent days: The wound was dressed with adhesive plaster, his bowels were kept sufficiently open, and a diaphoresis was promoted by small doses of tartarized antimony.—About this time he complained of a good deal of pain affecting the head on the injured side; and the quantity of the discharge from the wound, though of an approved appearance, was considerably increased. The wound retained its irritability and soreness to the touch; but the condition of it, upon the whole, was improved. The form of the external opening was circular, and its diameter not more than half an inch. The discharge was very profuse: and there supervened, about this period, some symptoms of slight pressure upon the brain, from the accumulation of matter. On this ground it was determined, that on the following day, an incision should be made in the scalp, by which the nature and extent of the injury of the bone might be precisely determined; and a perforation made with the trephine, if the existing symptoms should indicate its necessity, for the purpose of facilitating the escape of matter.

On the following day, we visited our patient, prepared for the accomplishment of this design; but it was deferred for the present, by some change which his symptoms and appearance had undergone.

That which we had hitherto supposed to be mere glossy granulations, just filling the centre of the wound, now projected at least the third of an inch beyond its edges. The lateral surfaces of the supposed fungus, presented a reticulated vascularity, and had acquired no adhesion to the circumference of the wound, while the upper surface of it was sloughy. The appearance of this production was peculiar. It was not like common fungus; nor had it any direct resemblance to the substance of the brain.

There was no objection, however, (as similar cases have proved), to removing this same fungus. It was accordingly snipped off with the scissars: but no sooner was this accomplished, than the wound was filled with another production, of a more extended projection than the last. The second was of a less equivocal appearance than the first, and could not possibly be mistaken for any thing else than what it was, (viz.) a protrusion of a portion of the cerebrum itself. The plan of operation was now somewhat altered. An additional perforation, according to our first design, would have given room for an additional protrusion of the brain: at least we had no right to conclude to the contrary, as it was impossible to define the extent of the ulceration of the dura mater.

That stupor, heaviness, and propensity to sleep, which had obtained so decidedly the day before, had now disappeared; and the motive for the operation no longer existed. To have extended the external wound would have answered no end; for we were able to discover, with tolerable accuracy, that the injury of the integument was as extensive as that of the bone; and if this had not been the case, there could have resulted little or no advantage from an enlargement of the superficial opening. He had recovered, in some degree, from that excessive lassitude and debility with which he had hitherto been oppressed; his pulse was somewhat fuller, but, in other respects, as it regarded the sufficiency and perfection of the functions of the brain, his condition was in nowise deteriorated. Twelve ounces of blood were taken from the arm; he was ordered to proceed with his aperient medicines, (which procured him habitually two or three stools every day), and no more pressure was made on the wound, than was sufficient to prevent any further protrusion. At this time, the substance filling the centre was continued a full half inch beyond the level of the skin, and it participated strongly in the regular pulsations of the brain.

1st of May.—A month has now elapsed since the occurrence of the accident, and the quantity of the discharge has been gradually diminishing. The man has sometimes felt slight pains in the head, to which he had been previously much subjected; but they have disappeared again in a few hours, without the assistance of any medical means. Neither his symptoms nor treatment for the last fortnight deserve any particular notice. The wound is somewhat contracted, the lateral surface of the fungus is united all around to its edges, and the discharge has now altogether ceased.

The pia mater at the circle of its adhesion appears thickened, strengthened, and reinforced by coagulating lymph, which has been effused and organized on its surface. All that part of the membrane which is elsewhere visible, still retains the delicacy of its texture. One would suppose it probable, that it was this adhesion which had prevented the free egress of matter, as the cessation of discharge was immediately consequent upon the imperviousness in this way produced. It appears, however, from other considerations, that the converse is the fact. There can be no question, but that suppuration beneath the cranium must have taken place to great extent: the quantity of matter discharged was infinitely too great to have been secreted from so small a surface as that occasioned in the skin. The pressure and flow of this matter, then, must have prevented the earlier acquirement of the adhesion: Either the symptoms of pressure upon the brain would otherwise have supervened upon the close of the opening, or the adhesion would have been torn, if the suppurative process within the cranium had not already ceased.

The wound now appears disposed to heal wholly from its circumference; while the centre, which comparatively is but slightly prominent, looks glassy, and most adverse to the deposition of any thing like cutaneous matter.

June 1st.—There is still a little fungus, about as large as a small pea, and a faint pulsation is yet perceptible in it. The wound heals from the edges, and the protrusion appears somewhat constricted by the circle of new skin; it was touched with the argent. nitrat. and a compress of lint bound tightly upon it.

June 3d.—The wound is quite healed. The place of it is marked by a slight depression, and the man feels freer from disease of every kind than at any former period of his life: no doubt wonderfully improved by the purgation he has undergone.

It appears to be grown almost into an established rule of practice, never to employ the interference of art in the treatment of a fractured skull, (except for the purpose of preventing mischief, as by bleeding, &c.), unless the existing symptoms would lead one to infer an absolute pressure upon the brain. The propriety of adhering invariably to this axiom appears to me extremely questionable; the reverse, indeed, would seem to promise some beneficial results, in all cases analogous to the one just submitted. If, on first seeing this patient, an incision had been made, and every portion of detached bone removed with the forceps, most probably no protrusion of cerebrum would have occurred. Spicula of bone may rest upon the dura mater, without having any prejudicial operation upon the functions of the brain: these spicula, if suffered to remain, would, as in this case, most probably occasion the ulceration or absorption of the dura mater, thereby *admitting* the occurrence of hernia cerebri. It would appear, therefore, in every similar instance, that the removal of detached pieces of bone was of an importance commensurate with the evil it was designed to prevent. What degree of importance ought to be attached to a protrusion of the brain, I leave to others to determine. This much, however, may be said in favour of that practice which I have ventured to recommend, that we are almost ignorant of the functions of the brain, as dependent upon the structure of the organ. Some facts would lead one to suppose, that the functions so essential to life were dependent, not upon the viscus as a whole, but more immediately upon some particular part or parts belonging to it. We are, as yet, too ignorant on these points, to pronounce with what portion of its structure the operations by which vitality is sustained are the most connected. In this state of our knowledge, then, it would appear most prudent to *prevent* that occurrence, by which any part of an organ, so mysterious in its function, and so essential in its influence, may be in any way disorganized, and separated from all its former relations.

I am fully aware, that the practice I have insisted upon has no claim or pretensions to novelty. I have bestowed more words upon it than I otherwise should have done, because I observe, that, in many books of surgery, the principle of withholding the interference of surgical measures, in cases of simple fracture of the skull, is by far too much generalized. It has happened in this, as in many other instances, that men, in quarrelling with one extreme, have fallen, with infinite satisfaction and content, at once into its opposite. Mr Abernethy, with his usual discrimination, has prescribed proper limitations to the above rule; and I have been anxious, in this way, to diffuse its publicity, because, in some elementary books of very general reference, and among others, in Mr Samuel Cooper's First Lines of Surgery, I find the axiom drawn at full length, without being in any shape qualified by the exception which ought to be appended to it.

IV.

On the Good Effect of a Combination of Ipecacuan and Laudanum in Dysentery. By George Playfair, Assistant-Surgeon, Bengal.

Should the following trivial remarks, on a very simple method of curing dysentery, have any thing new, interesting, or useful, you may make what use of them you please; and should you consider them of any importance, you may give the result publicly through the medium of your Journal. I have been induced to offer them to your notice, from circumstances which of late have more particularly attracted my attention to this disease; and should the subject be deemed by you worthy of insertion, it may meet with a more general, and, of course, a fairer trial than it is likely to do in this country, where hepatitis and dysentery are so closely allied, and where, excepting in some few unhealthy situations, dysentery is so seldom found an idiopathic disease.

The medicine I allude to is ipecacuan, given in doses from 30 to 60 grains, with an equal proportion of laudanum.

In the years 1803–4, when acting as surgeon of an Indiaman, in consequence of long-continued wet and blowing weather, dysentery became very prevalent; and from the crew having previously been subjected to repeated attacks of fever, so obstinate, that the common method of treatment was by no means so successful as I could have wished, I lost several of my patients. My anxiety became consequently great; and my endeavours to vary the mode of treatment, so as to produce a more beneficial effect, unceasing.

Ipecacuan I had often administered in small and repeated doses, but with no better success at this time than purgatives, calomel, and opium. I recollected to have seen in, I think, a Medical Review, that ipecacuan and opium had been tried in large doses with effect. The hint determined me to make the experiment; and I had every reason to be grateful for the success with which it was attended.

The nature of the disease, at this time prevalent, was alarming; the griping pain was severe; the tenesmus most distressing; the evacuations much mixed with blood; and the motions almost incessant. Considerable fever also prevailed.

I prescribed from half a drachm to a drachm of ipecacuan, combined with from 30 to 60 drops of laudanum, confining the patient for some hours afterwards to a horizontal posture. It often happened, however, that notwithstanding their attention to remain in this position, the first dose was vomited, but a second was commonly retained.

It was usually the case, that after the medicine was taken, no inclination to stool was experienced for many hours, the patient being, during that time, easy and free from the griping pain. Several loose motions then took place, but unmixed with blood, and unattended with tenesmus.

It sometimes happened that several loose easy motions succeeded the medicine in a very short time, and none afterwards; and that the bowels were even costive the day after the medicine had been given.

Seldom more than one dose was required to cure the disease; but when any symptoms remained, a repetition next day was sufficient to produce the desired effect.

It must however be remarked, that this treatment was always adopted at the commencement of the attack; for when the disease had been of any standing, the stomach was too irritable to retain the medicine even for an instant.

Its good effects certainly did not follow a relaxation of the surface of the body; such a circumstance seldom occurred.

I shall subjoin a few cases illustrative of its effects, taken at the time, of which you may make what use you think proper. I claim not the honour of having been the inventor of this simple formula; but should I fortunately become the means of bringing it into notice, and the practice undergo a fair trial, my views will have been fully accomplished.

It perhaps might have been better in some instances, and more agreeable to the usual mode of practice, to have premised evacuations; but at the time the cases occurred I was, from the uncommon severity and rapid progress of the disease, afraid of delay; and I had observed, that even after the bowels had been cleared out, the stomach became exceedingly irritable, at the same time having a conviction, that the medicine acted by no means as an astringent.

CASE I. 1803.

D. MORISON, seaman, aged 27, of a robust and plethoric habit of body, was, on the 11th April, attacked with dysentery of the usual kind, viz. much griping pain, and very frequent stools, severe tenesmus, with nausea and inclination to vomit, acute headach, and general uneasiness. He had ipecacuan half a drachm, with 30 drops of laudanum, but soon after vomited it. The dose was repeated, with the addition of 10 drops of laudanum, and retained. In the course of the day he had several stools, but none after nine o'clock in the evening, until noon the 12th, when he had two, but perfectly natural in colour and consistence: Before this the evacuations had consisted of mucus almost entirely. He complained only of slight flying pains in his bowels, with flatulence, until the 13th, when he was discharged cured, without having taken any other medicine.

CASE II.

W. TROY, a private of his Majesty's 65th regiment, was, on the evening of the 11th of April, attacked with dysentery. The symptoms were severe, and accompanied with fever. He had given him half a drachm of ipecacuan, with 35 drops of laudanum, and had several loose easy motions in the course of the night. On the morning of the 12th, the griping pain had almost left him; he felt easy in his bowels, and during the whole of the day had only one motion; but he complained of slight headach; his pulse was rather quick, and his skin hot. I gave him three grains of calomel, with a little rhubarb; and he had for his diet sago, with an allowance of wine. 14th, He had no griping pain, headach almost gone, felt a sensation of soreness all over the abdomen, and had no stool since the 12th. I gave him 15 grains of rhubarb and 30 grains of magnesia, which procured him three easy motions, after which he seemed well in every respect. His head feeling light and giddy, had a few doses of bark and port wine, and on the 16th was discharged well.

The medicine in this case caused no nausea whatever.

CASE III.

—— GARRAGIN, aged 40, a private of his Majesty's 65th regiment, on the 9th of April was seized with acute griping pain, and very frequent stools, which were thin, slimy, and mixed with blood, and accompanied by distressing tenesmus; his skin was hot, and his pulse very frequent; his tongue foul and yellowish. I prescribed 30 grains of ipecacuan, with 35 drops of laudanum; he was very easy all the day, and had no stool until evening. During the night he had several motions, but had no tenesmus, and the evacuations were unmixed with blood. The griping pain returned on the morning of the 10th, and the medicine was repeated. Had no motion all the day, and in the night had again several thin stools, but natural, and without griping. Had only one motion on the 11th; and on the 12th was discharged, cured.

In this case, also, the medicine occasioned no nausea.

CASE IV.

—— DAWSON, 24th April, complained of severe griping and looseness of the bowels, with constant inclination to go to stool, and much tenesmus: his evacuations consisted of mucus mixed with blood. I gave him one drachm of ipecacuan, with 60 drops of laudanum. He vomited the first, but retained a repetition of the dose. Had only one stool in the night of the 24th, and the griping had entirely left him. He had for his food a strong decoction of barley. On the 26th, he had two which he described as consisting entirely of blood, but had none in the evening or during the night. The morning of the 27th complained only of flatulence; his face seemed slightly swelled, and had been so ever since he had the first dose of the medicine. Had complained of headach on the 26th, but which had then left him; 28th, he had no complaint remaining.

These are not the only cases which I could produce of the beneficial effects of this medicine, but they suffice to show its success, the result in all being nearly the same. I shall not intrude longer on your time, but leave it with you to decide on the importance which may be attached to what I have already written.

Calcutta, April 11, 1812.

V.

Cases of Hydrophobia, treated, one of them successfully, by Mr F. TYMON, Assistant Surgeon, H. M. 22d Light Dragoons; *with Observations by* Dr A. BERRY of the Madras Establishment, *Proceedings of the Medical Board, and Resolutions of the Honourable Governor in Council, in reference thereto.*[*]

To the Editor of the Madras Gazette.

SIR,—Considering it to be the duty of every medical man to make as publicly known as possible, every fact conducive to the welfare of suffering humanity, I give you two cases of hydrophobia, from the Medical Journal of H. M. 22d Dragoons at Arcot, for last month, as a novel and interesting article of communication for your next paper—one case unsuccessful, to show the nature of the disease—and the other successfully treated, a well marked case, and perhaps the first on record where a patient, under such symptoms, has been saved; for in no disease have all endeavours at cure hitherto so uniformly failed as in this, when hydrophobic symptoms induced by the bite of a rabid animal have once been fully formed.

The alarm and dread that hydrophobia at all times causes,—the great distress that has been so frequently depicted from its effects,—and the liability to it, which all are exposed to from the bite of any rabid animal.—will, I think, attach considerable interest to the treatment adopted in the successful case, as it holds out a rational prospect of cure in this, one of the most melancholy forms of disease.

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[*] For these valuable papers, we are indebted to Mr James Kellie, Assistant-Surgeon at Bangalore, and to Dr Shoolbred, Surgeon to the Presidency at Calcutta.

I shall reserve what I have further to observe, for the conclusion of this paper, and give you the cases as they appear in the Journal of Mr F. Tymon, the assistant-surgeon of the regiment. —And first,

The Unsuccessful Case.

John Irwin, private dragoon, admitted on the 6th October. In the morning when I first saw him, he was convulsed all over his body, the muscles of his neck unusually agitated, pulse at times quick, and afterwards ceasing altogether for a short lapse. Ordered him into the hospital. On being brought there, found no alteration in his symptoms. Directed an antispasmodic draught, which I offered in person. This he first viewed in silence; but, when pressed to take it, and discovering it to be a liquid, his convulsions increased with redoubled violence; sweats broke out profusely, attended with difficult respiration. He said the light caused him great uneasiness, consequently the light was excluded. He was observed to froth at the mouth, and his insuperable aversion to any thing in the form of a fluid, awoke in my mind the belief that all these direful symptoms must be connected with, or in fact be the result of canine madness. Unhappily, on inquiry, this supposition was not groundless, for the patient acknowledged his being bit on the 15th July last by a dog in the barracks. His raving rather increased, but his wife (*an European*) corroborated the fact. I did my utmost to induce him to swallow the draught alluded to, but without success. He was sensible to reasoning at times, and abused dogs, lamenting his situation; but nothing liquid would prove acceptable. Whenever liquids were offered, he took them into his hands, attempted putting the fluids to his mouth, and immediately dashed them on the ground, and then his spasms commenced. He allowed me to bleed him. I took about 15 oz. of blood, and bound up his arm. This produced no alteration in his aversion to fluids. Ordered an injection of 300 drops of laudanum, and to rub in a drachm (of mercurial ointment?) twice every hour. He expired five hours after being admitted.

On opening the body the appearances were remarkable. The stomach was inflamed, several blood-vessels were extravasated, and the stomach loaded with bile. The intestines appeared to have undergone no change; the liver was slightly altered from its natural colour; the gall-bladder enlarged considerably, and full of bile, very hot to the touch. The lungs were not changed in any manner, nor could I discover any thing preternatural in the thorax. His eyes were swelled, and the blood-vessels on the tunica conjunctiva enlarged in their diameters beyond conception. On opening the head, nothing appeared which could induce a belief that any part of the brain or its vessels had suffered. The tongue was swelled, and so were the fauces, and inflamed.

The Successful Case.

Benjamin Mason, a farrier, aged 34, was seized with violent spasms on the 7th October. When I saw him, I found him violently agitated and screaming loudly; eight of the strongest men of his regiment were required to keep him on his cot; he clenched his fists at times, and made efforts to seize every thing he saw. In the midst of the paroxysm he said that carriages, horses, animals of every description were floating before him in the air. He was covered all over with sweat; his eyes at times staring, and at other times melancholy; gnashed his teeth in a manner not to be described; his neck was swelled; pulse very fast; light odious; pain in his head and temples increasing. He called for drink; but the instant he heard them pouring water into a tumbler his wildness increased. He then beckoned for it. When it came nigh him he shook his hand and trembled, I may say shivered. I made inquiries if he had been bitten by a dog at any period: his comrades aknowledged he was. One hour after I saw him, his ravings and efforts to disengage himself from his keepers became so tiresome, as to render it necessary to tie him to his cot; accordingly he was secured by several coils of bed-tape. I discovered he was bitten on his left thumb; therefore no obscurity now remained as to the nature of his complaint. I began by bleeding him until *scarcely a pulsation was to be felt in either arm.* During the operation, he made several efforts to bite me. As his arms and body were completely secured, and the quantity of blood taken away naturally reduced his efforts, I now renewed offering the draught, which consisted of 100 drops of laudanum in mint-water. He endeavoured to reject it; but I separated his jaws by means of a small piece of wood, introduced between them, and poured the draught into his mouth, which he swallowed by keeping his head in a recumbent posture. Notwithstanding some efforts were made in deglutition to reject it, his condition was so much debilitated from loss of blood as to enable me to effect it.

In the mean time I ordered injections of 300 drops of laudanum every second hour, and a drachm of mercurial ointment to be rubbed in every third hour.

P. M. 4 o'clock.—Is now in a slumber. At half past 5 he awoke, with slight efforts to separate himself from his bindings.

Pain in his head excruciating. Shaved his head, and blistered it all over. Mercurial frictions to be continued. Still has an aversion to fluids. Used the same means as before. Draught and glysters to be repeated.

P. M. 9 o'clock.—Slept for two hours, and appears to be refreshed; complains of a lassitude and sickness at stomach; speaks rationally. Offered him conjee water, which he kept in his mouth for a short time, swallowed a little, and discharged the remainder. Pulse rising. Repeat the frictions. To take a pill of four grains of calomel and two grains of James's powder, three times during the night. To repeat the injection twice during the night.

8th.—Pain in his head subsided; extremely debilitated, but rational; calls for drink, which, with some hesitation, he puts to his mouth and swallows, with a slight noise in his throat; pulse low. Mercurial frictions as before described to be continued. A pill of calomel four grains, and of opium and James's powder two grains, every second hour. Opiate injections to be repeated.

P. M.—pain in his forehead became excruciating; was tranquil otherwise during the day; pulse 79. A blister to be applied to his forehead. To repeat the pills three times in the night, and to rub in a drachm of mercurial ointment every second hour.

9th.—Very easy; relieved from pain and uneasiness in his head; had only one evacuation for the last 24 hours. Castor oil one ounce to be taken immediately. Frictions to be continued.

P. M.—Gums getting tender; feels no horror at the sight or approach of liquids; pulse rather hurried. To rub in a drachm of the ointment thrice during the night; pills to be continued. Bathed his feet in warm water.

10th,—Fugitive dislike to fluids; when pressed, swallows conjee water, and took one glass of wine; pulse rising and regular; gums tender. Continue friction; repeat pills.

P. M.—Bathed his feet as before.

11th.—No mercurials in any shape; complains of weakness. His countenance is fallen, but appearances of doing well are manifest; spits a great deal. Continue pills and frictions.

P. M.—No alteration. Repeat pill twice during the night.

12th.—Very easy; gums salivated.

13th.—Very easy. 14th, do. 15th, do. 16th, do. 17th, do. 18th, do. 19th, do. 20th,—Discharged him from hospital in a perfect state of convalescence, and he has since resumed his duties. (Nov. 1.)

(Signed) F. Tymon, Assistant Surgeon, 22d Dragoons.

To A. Berry, Esq. M. D.

Observations.

That this was a real cure of hydrophobia cannot be doubted. To satisfy me the more fully on this subject, a statement has been forwarded from Captain Broome commanding the detachment, depicting the situation of Farrier Mason as stated by Mr Tymon. Captain Broome says that Mason, after the bleeding, became somewhat composed, and held out his hand, saying, "I was bit here, sir:" and Captain Broome states, "I plainly saw a *dark spot*, as if a wound, on the inside of his finger."

A certificate from Henry Jackson, serjeant, specifies, that he and Irwin were bit on the same day, in the beginning of August, and Mason a day or two after.

As to the medical treatment, it must be immediately remarked by the medical reader of these two cases, that the bleeding in John Irwin's case, carried only to the extent of 15 oz., did not arrest, in any degree, the rapid progress of the disease; and that the bleeding of Benjamin Mason, continued *until scarcely a pulsation in either arm was to be felt*, saved his life by diminishing violent action, and admitting the effect of medicines, that in all former experience had uniformly failed.

It also appears from these two cases, and several unsuccessful ones I have seen, that the hydrophobia from the bite of a rabid animal is of short duration, all those that I have seen having died within 24 or 36 hours at farthest, from the appearance of the disease; and Benjamin Mason was evidently nearly cured, the evening of the day he was attacked, for, at 9 o'clock at night of the 7th October, he could keep conjee water in his mouth, and swallowed a little.

It would also appear that this disease may sometimes put on so mild a form as not to be dangerous, as appears by two other cases from Mr Tymon, --one of Corporal Rice, who was bit severely in the hand by a dog, about the middle of May, and another of Serjeant Jackson, who was bit on the same day that John Irwin was, about the beginning of August, instead of the 15th of July, as stated in Irwin's case.

Corporal Rice was admitted into the Hospital on the 6th of October, in the evening, for symptoms indicating hydrophobia;—appearing agitated and dejected; complaining of excruciating pain of his head; refusing to drink water when offered to him; pushing it from him at the same time in a gentle manner, accompanied with a deep sigh. He walked about the room, and his ideas were somewhat deranged. Refused to drink water for the whole of the 6th, or even to suck limes, though thirsty. His head was blistered, and mercury used both internally and externally, by frictions with injections. The hydrophobic symptoms in this case ceased in the evening of the succeeding day.

Serjeant Jackson, bit by the same dog that bit Benjamin Mason, was admitted into hospital on the evening of the 7th October. He was one of the number that secured Mason to his cot; he then ridiculed the idea of any danger to himself. When admitted, he complained of tormenting pain in his head; impatience of light; started and was agitated by any sudden gust of wind blowing on him; had a great flow of saliva; was much distressed and agitated at even the sight of water poured out. Pulse regular; partial sweats; drowsy and melancholy; eyes almost fixed, and very much inflamed. By blisters to his head, and mercury internally, and by friction aud purgative injections, in the evening of the succeeding day he called for food, and drank conjee water without difficulty.

These few detailed facts, tending to confirm the short period of the disease, I consider of value, as giving confidence to the practitioner, and hope to the patient, by showing, when the progress of the disease can be arrested, a cure may be effected.

The state of John Irwin's stomach, if solely caused by hydrophobia, would indicate the inflammatory nature of the disease, and its principal seat of action, from the fauces to the stomach, rendering it probable that all irritating medicines are improper, and likely to prove hurtful, until that inflammatory action is diminished. I mention this particularly, from verdigrise in considerable quantity having been stated, in an American paper, to have cured this disease; but I have seen no cases to satisfy me of the utility of this medicine, or that it was ever given with effect in any severe case of hydrophobia.

I will make a few extracts from authors to show how remarkable the successful treatment of hydrophobia must be considered. The celebrated Dr Fothergill publishes a case of hydrophobia from the bite of a cat, in 1774, which terminated fatally in about 48 hours; and, in his notes on the case, when speaking of a cure for the canine madness, he says, the reader "will find perhaps nothing more of certainty in this respect, than that *all the remedies* hitherto proposed, either as preventives or cures, are found, by experience, to be altogether ineffectual."

The patient was blooded, but only six ounces of blood at first are stated to have been abstracted. He was a second time bled, as Dr Fothergill states, standing, according as his strength would bear,—and in the evening, the patient received his physicians with the utmost transport of joy, describing, in strong terms, the pleasure and benefit he received from the warm bath, and the hopes he now conceived of a speedy recovery. The bleeding would, in this case, appear to have been too long delayed; for he died exhausted in about seven or eight hours after, having been for about half an hour in the warm bath after it, from which, when immersed, he always found great relief.

Dr Mosely, in his publication more than 20 years later, recommends the cutting out of the part bit as the only remedy. He says, " this method of treating the bites of mad animals, if on a part where it can be used, will, I am confident, prevent their fatal effects; applied *at any time previous* to the first symptoms that forerun a general affection which ends in hydrophobia, and admits of *no remedy.*"

Mr Darwin, in his Zoonomia, speaks of hydrophobia as a fatal disease, and considers it to resemble tetanus or locked-jaw, in its tendency to convulsion from a distant wound. This similarity between the two diseases may suggest, under certain circumstances, to medical practitioners, the utility of bleeding carried to the length of diminishing spasmodic action in those dangerous, and too frequently fatal diseases, tetanus and locked-jaw, and if it is stopped when fainting occurs, no bad consequences follow, as is shown by Dr Fothergill, and more particularly by Dr Veitch on ophthalmia; nay, that it is less detrimental than repeated bleedings even to a less extent.

Dr Cullen speaks only generally and doubtfully of any preventive or remedy for hydrophobia.

I have now, I believe, stated sufficient to show, that the successful treatment of a well marked case of hydrophobia is an event of great import to the public and to the medical profession; and that further facts, properly detailed, either to confirm or to show the inefficacy of the practice here recommended, or to point out any other successful method, should be made known by medical practitioners, to rescue this disease from being an opprobrium to the healing art; and attention should be had, on any recurrence of such an accident, to a person who has been cured of a well-marked disease—to ascertain whether the poison of a rabid animal has obeyed the laws of the inoculated animal poisons that infect the system, after a time, by absorption—produce a general affection and febrile disease—and thus render any subsequent inoculation or infection innoxious; which I think may be probable. If this can be ascertained, much will be gained in the knowledge of this disease; and I have, in consequence, requested to be made acquainted with whatever may befal Benjamin Mason, whose recovery has suggested this idea.

I am, Sir, your obedient servant,

Fort St George, Nov. 20, 1811. A. Berry.

Medical Board, 7th February 1812.

1. The Medical Board have the honour to acknowledge the return of their proceedings, of the 29th November last, with the resolutions of the Honourable the Governor in Council thereon, dated the 7th ultimo, expressing the happiness which his Honour in Council will have, in giving all possible publicity to the authenticated case of recovery from hydrophobia, and directing the Board to transmit to him two copies of the extract from Mr Tymon's Journal, for the information of the Governments of Bengal and Bombay, with such observations on the case as the Board may judge necessary.

2. The Medical Board have now the honour to transmit two official copies of the case of Benjamin Mason, a farrier in his Majesty's 22d Dragoons, extracted from the Journal of Mr Tymon, the Assistant Surgeon of the Regiment, which came to the Board authenticated in the fullest manner, both by Mr Tymon, and also by a certificate from Captain Broome, commanding the detachment.

3. The violence of the disease, and the decidedly successful practice that was adopted, make this case of hydrophobia of considerable interest, holding out, as it does, a rational prospect of cure in one of the most melancholy forms of disease, and accordingly deserving of being most carefully and extensively published.

4. Another case, which terminated fatally, showed that the cure of Benjamin Mason was in a great measure, if not solely, to be attributed to bleeding having been carried to the extent described by Mr Tymon, thereby arresting the progress of the disease, and gaining time for the administration of the proper medicines. It is to this circumstance that the Medical Board think attention should be chiefly directed, and that, under all similar circumstances, this powerful remedy should be principally depended upon, and early adopted, as the disease, when fully formed, is rapid in its progress, and may possibly be soon too far advanced for even bleeding *to fainting* being of utility; for it is only from a copious loss of blood that the hope of recovery can be entertained; and as medical practitioners can always judge of the extent to which that can be carried with safety, the Medical Board consider it only necessary to draw their attention to it, when sanctioned by so marked an instance of success, as that stated in the case of Benjamin Mason.

5. Another case of the successful treatment of hydrophobia has been brought to the notice of the Board, in an extract from the Philosophical Magazine for August 1805. This is mentioned

as an additional illustration of the utility of bleeding; and further, that when it is not carried to sufficient extent at the beginning, a greater abstraction of blood becomes necessary than would otherwise have been required. This cure is stated to have been performed by a Dr Burton, and communicated to Dr Rush, both of Philadelphia, and must also be deemed authentic. For these satisfactory reasons, the Medical Board have been induced to notice it.

(Signed) T. Gahagan, *Physician-General and President Medical Board.*—A. Watson, M. D. *2d Member Medical Board.* —Andrew Berry, *3d Member Medical Board.*

Resolution of the Honourable the Governor in Council, dated 21st February 1812.

Resolved, That 250 printed copies of these proceedings, and of the certified case of recovery from hydrophobia to which they relate, be prepared at the Government Press, under the superintendance of the Medical Board, for the purpose of general circulation, being first attested by the signature of their Secretary.

By order of the Honourable the Governor in Council.

G. Strachey, *Secretary to Government.*

VI.

Case of Hydrophobia, successfully treated. By John Shoolbred, M. D. of the Bengal Establishment; Surgeon to the Presidency, and to the Calcutta Native Hospital. First published in the Asiatic Mirror.

To the Editor of the Asiatic Mirror.

Sir,—I have the satisfaction to enclose a case of recovery from hydrophobia, effected by blood-letting alone.

A newspaper, I am aware, is not the most appropriate vehicle for the communciation of medical science; yet, as I consider the speedy and extensive promulgation of this case to be of the utmost importance to the lives of individuals, and being acquainted with no means by which that can be accomplished, so readily as through the medium of your paper, I trust you will not refuse me the favour of giving it a place in the ensuing Number of the Mirror. I am, Sir, your most obedient servant,

JOHN SHOOLBRED.

Calcutta, May 18*th*, 1812.

Tuesday, May 5th, 1812.—About 3 P. M., Amier, a Musselman Bhestie (water-carrier), from 25 to 30 years of age, and middle stature, in the service of Mr John Wood, schoolmaster at Chowringhee, was brought to the Native Hospital, labouring under the most unequivocal symptoms of hydrophobia.

The note from Mr Wood, requesting admission for this patient, and the friends who accompanied him, stated that he had been bitten in the leg about 3 weeks before, by a dog believed to be mad, and that the symptoms of his disease had appeared that morning, the 5th.

I visited him in the hospital, the moment I heard of his arrival, and found him sitting on the side of a cot, with an attendant holding him by each arm. The first view was sufficient to satisfy me of the nature of his complaint. His body, arms, and throat were affected with constant and uncontrollable spasmodic startings. The muscles of his face were thrown into quick convulsive action at each inspiration, drawing back the angles of the mouth, and at the same instant depressing the lower jaw, so as to communicate the most hideous expression to the countenance. His eyes appeared starting from their sockets and suffused with blood; sometimes fixed in a wild and terrific stare; at others, rolling about, as if they followed some ideal object of terror, from which he apprehended immediate danger. A viscid saliva flowed from his mouth, which was always open, except when the lips were momentarily brought together for the purpose of forcibly expelling the offensive secretion that adhered to them, and which he effected with that peculiar kind of noise, which has been often compared to the barking of a dog. His temples and throat were bedewed with clammy moisture. His respiration was exceedingly hurried, and might more properly be called panting than breathing; or it still more nearly resembled that short and interrupted kind of sobbing, that takes place when a person gradually descends into the cold bath. He was exceedingly impatient of restraint; and whenever he could get a hand disengaged, he immediately struck the pit of his stomach with it—pointing out that part as the seat of some undescribable uneasiness. From the constant agitation of his whole frame, and the startings of his arms, it was impossible to count his pulse with exactness; it was, however, very unequal, both in strength and frequency;

at times scarcely perceptible, and then rising again under the finger; sometimes moderately slow and regular for a few pulsations, and immediately after so quick as not to be counted; but conveying, upon the whole, an idea of a greatly oppressed and impeded circulation. His skin was not hot; and though his head was in incessant motion, accompanied with such savage expression and contortion of countenance, as might easily have alarmed those unaccustomed to such appearances, he made no attempt to bite, which is far from being a frequent symptom of the disease; and when it does occur, must be considered merely as an act of impatience at being held, and, no more than the peculiar noise above noticed, as indicating any thing of the canine nature imparted by the bite; an opinion which has been sometimes fancifully but absurdly entertained.

When questioned concerning his own feelings or the cause of his illness, he was incapable of making any reply; being prevented, it is probable, either by the hurried state of his respiration, or by his mind being too deeply absorbed in the contemplation of horrible ideas, to admit of his attending to the queries addressed to him.

I desired water to be offered to him; at the mention of which he started with increased horror and agitation, and endeavoured to disengage himself from those that held him. When one of the attendants approached with a cup of water, he looked at it wishfully, and after some efforts, with apparent reluctance, stretched out his hand to take hold of it; but before he could reach the cup, his hand was suddenly drawn back by a convulsive motion; at the same instant, he turned away his head, and writhed himself round on the bed in an agony of terror and despair, wholly inconceivable by any person who has not been a witness of the horrors of this most dreadful, and hitherto, it may be added, most irremediable of human maladies.

Such was the state of the patient at the moment of his admission, and for the few minutes that necessarily elapsed while these appearances were passing under my observation.

Of the nature of the complaint there could not exist a shadow of doubt; and having so recently read in the Madras Papers a case of Hydrophobia successfully treated by Mr Tymon, of his Majesty's 22d Dragoons, by bleeding, mercury, and opium, I determined on the immediate adoption of the same plan.

I therefore, without delay, opened a vein in the right arm by a large orifice, out of which the blood sprung with uncommon impetuosity, and of so florid a colour as to resemble arterial rather than venous blood. By the time that 16 or 20 ounces of blood had flowed, the spasmodic startings of his arms, body, and neck, had considerably diminished; his breathing had become more calm, with less contortion of countenance, and he audibly acknowledged, that the pain about the præcordia and region of the stomach was upon the decline. Encouraged by these incipient appearances of amendment, I allowed the flow of blood to continue; and when about two pints were taken away, seeing him greatly composed, I desired water to be again offered to him—when, equally to my astonishment and delight, he took the cup in his left hand, the blood still flowing from the right arm, and calmly, but with undescribable expression of satisfaction, drank two or three ounces of water—the sight of which, but a few minutes before, had thrown him into the most dreadful agonies. Soon after swallowing the water, he retched three or four times, but ejected nothing but saliva from his mouth and fauces; and finding now that his pulse was 104, weak, soft, and regular, —that he was become faint,—and that all appearance of uneasiness had ceased, so as to allow him to take a second draught of water, about four ounces,—I closed the vein, and laid him down on the bed. At this moment, he expressed a desire to have a natural alvine evacuation, and wished to go out of the hospital for that purpose; but as that could not be complied with, he took no more notice of it at this time. It is worthy of remark also, that during the bleeding, he made a sign to have himself fanned, a thing I never knew a patient in hydrophobia to do before; their distress being so uniformly increased by any current of air blowing upon them, that, according to all my experience, the dread of air in motion is as constant an attendant on the disease as the dread of water itself.

After the bleeding he remained perfectly quiet, and fell into a slumber for about an hour: another circumstance which also strongly marks the abolition of the disease, as no hydrophobic patient was ever known to sleep. When he awoke, he expressed a wish to have some sherbet, which was immediately given to him, and he drank four ounces of it with perfect ease. He then fell into another slumber, during which some convulsive startings were again perceptible about his arms, chest, and face, but not strong enough to wake him. At ¼ past 5, he spontaneously awoke, and appeared again somewhat agitated, with more suspicion in his looks, and of apparent doubt whether he could swallow as well as before; for when he took the cup, he put it to his lips with a quick motion, and gulped down about four ounces of water in a hurried manner, as if afraid that the difficulty of swallowing would be increased by a moment's delay. He also put his hand to the region of the stomach, and said that the pain in that part was returning. These threatening appearances of relapse determined me to hazard a farther detraction of blood. I therefore immediately opened a vein in the left arm, and allowed the blood to flow again till he completely fainted; but previous to this effect of the bleeding, the pain at the stomach had ceased; and while the blood was yet flowing, he had again drank four ounces of water without fear or disgust. When he recovered from the fainting fit, he retched several times, but, as before, discharged nothing but saliva.

At the end of the first bleeding, his pulse was 104; immediately before the second, it was 96, with a slight degree of sharpness in the beat; and after recovering from the fainting occasioned by the second bleeding, it was 88, regular, soft, and feeble, and he now complained of nothing but extreme weakness, and giddiness of the head. And at this stage of the case, I apprehend, it will be allowed that the cure of the hydrophobia was complete:—whether it would be permanent or not, remained yet to be seen.

When I began the treatment of this patient, it was my intention, as I have said, to follow in every circumstance the practice pursued in Mr Tymon's successful case; and accordingly, a draught with 100 drops of tincture of opium, and an enema of 300, were in readiness to be administered immediately after the bleeding. But seeing the surprising effects of the bleeding alone, and feeling convinced that the disease was, for the present at least, completely annihilated by the copiousness of that evacuation, I determined to preserve the treatment as simple as possible, in order that, if the patient did finally recover, it might with certainty be known to what he owed his safety; and that thence the application of the same practice to future cases of hydrophobia might with the greater confidence be recommended:—a resolution in which I was the more confirmed from having heard some medical friends, whose opinions are entitled to every degree of respect, ascribe Mr Tymon's success to the mercury he had used, rather than to the bleeding.

I am now fully persuaded, however, that I might safely, as far as the hydrophobia was concerned, have omitted all remedies after the bleeding: But thinking that calomel and opium, in repeated doses, were more likely than any thing else to induce that state of the system which would be least favourable to a relapse; and also that if the patient, notwithstanding his present promising appearance, did not finally recover, it would certainly be said that I had not given him a fair chance, by departing, in any particular, from the treatment which had proved so successful in the hands of Mr Tymon, I was led to conform to it so far, as to order four grains of calomel and one grain of opium to be given every three hours.

The first pill was taken at a quarter before six; but it was immediately rejected, followed by some water. A second was given five minutes before six, and remained. He now slept till seven, then drank some more water, and had a natural evacuation of his bowels: another circumstance which confirmed me in the belief that the disease was completely and permanently subdued,—having never before seen or read in any history of the disease, of such an occurrence as a natural action of the alimentary canal, in a case of hydrophobia.

At nine he took another pill, and again at twelve, and continued to slumber and drink water as often as he pleased.

Wednesday, May 6th—(*2d day*) 6 A. M. Has passed the night well. Took a pill at three, and another now. Has drunk water frequently. Pulse 84. Skin cool. Tongue clean at the edges; some remain of betle, eaten before he was taken ill, covered the centre part. Two more alvine evacuations during the night. Complains of headach, but is entirely free from uneasiness about the stomach.

On examining the blood drawn yesterday, the surface of the coagulum is found not to be in the least concave, neither does it exhibit the slightest appearance of what is called the buffy coat. The quantity first drawn, making allowance for the evaporation of the night, measures 40 ounces; and the last between seven and eight.

Nine A. M.—Took another pill, which was followed by another evacuation; and, in half an hour afterwards, he ate eight ounces of sago. Is quite composed, and can answer questions distinctly concerning the accident and subsequent occurrences, till the time he was taken ill.

He says, that 19 days ago (including this day) when returning about 4 in the afternoon, from his own house at Russapuglah, to his master's at Chouringhee, he saw a pariah dog seize a fisherman, and bite him. Several people were collected at the spot; he also approached, when the same dog ran at him, and, as he was retreating before him, bit him in the back part of the right leg, about six inches above the ankle, where he shows two scars at the distance of an inch and a half from each other, but without any appearance of inflammation or thickening of the integuments. The dog, after biting him, disappeared, and he does not know what became of him or of the fisherman. The wounds bled a good deal; but not being very deep, they soon healed, without any application. He took no remedy, except, on the day he was bitten, a small piece of scarlet cloth *(soultanee banat)* wrapt up in a piece of ripe plantain, which was recommended to him as an infallible antidote against infection from the bite of a mad dog. He never saw any one in hydrophobia; and though he had heard that persons bitten by a mad dog were liable to such a disease, the apprehension of it never dwelt on his mind, or scarcely ever occurred to him after the day on which he was bitten. He continued in his usual health till the 4th instant, seventeen days after the bite, when he found himself dull, heavy, and listless, with loss of appetite, and frequent apprehension that dogs, cats, and jackalls, were about to seize upon him. He also felt a pricking sensation in the part bitten. When his mother-in-law brought him his breakfast, he was afraid to eat it. He continued his business, however, of taking water from the tank to the house, till about noon of that day, after which he could not bear to look on, or to touch the water, being constantly harassed, whenever he attempted to do so, with the horrible appearance of different animals ready to devour him. He now, for the first time, thought of the disease arising from the bite of a mad dog, was convinced that was the cause of his present distress, and fully believed he should die of it. He ate no supper, nor drank any water that night, in consequence of the horrible phantoms that incessantly haunted his imagination. In the morning all his horrors were increased; the spasms came on, accompanied by anxiety, oppression, and pain about the præcordia and stomach: and those about him say that he continued to get worse in every respect, until he arrived at the hospital in the state already described. He does not himself distinctly remember any thing that happened during the whole day. He has some faint recollection of having been at his own house; but how he got there—when he left it—or by what means he was brought to the hospital, he does not at all know. The first thing he can recal to his mind is drinking the sherbet—and he says he has had his senses perfectly since that time—and that all his fears then left him, and have not since returned. This, however, is not entirely correct, as he acknowledges that he does not recollect the second bleeding, which shows that the disease had then so far returned, as again to disorder his mental faculties.

Half past 10 A. M.—Complains of severe headach, and his eyes are more suffused than they were in the morning. No return of other symptoms.

Head shaved, and six leeches applied to each temple.

Three P. M. Took a pill at 12, and another just now. Leeches bled freely. Headach relieved. Took eight ounces more of sago about noon.

Six P. M.—The same. Has now taken 28 grs. of calomel and

7 of opium. To take from this time only 2 grs of calomel, and half a grain of opium every three hours.

Nine P. M.—Has slept for two hours. Pulse 80. Took another of the pills last ordered, also some more sago. Copious bilious evacuation. Still complains of giddiness, but not headach.

Thursday, the 7th, (third day,) 6 A. M.—Took a pill at 12, but refused one at 3, saying his mouth was sore. Took one now. Has been rather restless in the night. Threw up some bile this morning.

Ten A. M.—Exceedingly distressed by excessive secretion of bile, which he is frequently throwing up and also passing downwards in great quantity, and of a dark green colour. Pulse 110. Some heat of skin; expression of uneasiness in his countenance—burning sensation all over the abdomen; but quite different, he says, from the former pain about the stomach. He was ordered a pint of infusion of camomile, which brought off much bile; at 11, eight grains of calomel; and at half past 12, half a drachm each of jalap and magnesia. By the effects of these remedies, he was much relieved in the evening; though the complaint continued to disturb him in the night, and it was necessary, on

Friday morning, the 8th, (fourth day) to promote the farther evacuation of bile by senna, manna, and cream of tartar, and to order an enema of conjee to allay local irritation. Pulse only 80, soft. Burning removed from the abdomen. Ate a water melon in the night. Copious flow of saliva from his mouth.

Saturday 9th, (fifth day) 9 A. M.—Has passed a good night. Excessive secretion of bile has ceased. Clamorous for food, but I allow him only rice and sago; declines milk. He appears now to be free from all complaint. After this time nothing remarkable occurred. He had a strong appetite, and was allowed vegetable curry. For several evenings some heat of skin and acceleration of pulse were perceptible; but these soon went off from cold bathing, and a constant attention to keep his bowels in an open state.

Monday, May 18th, (fourteenth day).—Has been for some days past on the usual hospital diet; and feeling himself well in every respect, now expresses a wish to be discharged and return to his usual business, but, as the weather is exceedingly hot, (thermometer in the shade from 95° to 100°), I have prevailed upon him to continue in the hospital till the setting in of the rains. I shall then, if possible, persuade him to remain in my own employment for the next twelve months, lest, if he were discharged, and should happen to die, of whatever disease, it might be alleged that he was, after all, carried off by a relapse of the hydrophobia.

Remarks.

On hearing that a recovery from hydrophobia has been effected in the short space of two hours, by the single remedy of blood-letting, a doubt may probably occur to a person acquainted with the previous history of this formidable malady, and the nearly uniform failure of all attempts hitherto made for its cure, whether the disease now said to be cured was in reality a genuine case of hydrophobia, produced by the bite of a rabid animal. I admit the scepticism to be reasonable; for in the relation of a case, which has terminated so differently from all others yet on record, (not even excepting the case so successfully treated by Mr Tymon), it is natural to suspect either some misconception or misrepresentation of facts, or some fallacy in the deductions derived from them.

An attentive perusal of the preceding narrative will, it is presumed, remove these doubts from the minds of the majority of readers; yet, as some individuals may not be convinced by that evidence, which, to others, appears full and satisfactory, and, as it is a matter of the utmost importance to future sufferers from hydrophobia, that no doubt should be allowed to remain, either as to the existence of the disease itself, in the case above related, or that the bleeding was the sole remedy, I shall, as briefly as possible, endeavour to establish the certainty of both those facts, beyond the possibility of contradiction.

To a person who has never seen a case of hydrophobia, I acknowledge the difficulty, nay, almost the impossibility, of conveying by words an adequate notion of the disease. The horrors of that state must be seen, to be fully conceived; but being once seen by a medical observer of any discernment, they are indelibly fixed in the mind; and I contend that it would then be highly improbable that he should ever mistake any other disease for hydrophobia; or take hydrophobia for any of those affections to which it has been said to bear some resemblance;—so deep and so permanent, I am convinced, would be the impression left on his mind by the contemplation of even a single case of hydrophobia. But when I state that my situation as surgeon to the Calcutta Native Hospital, for the last eighteen years, has afforded me opportunities of seeing the disease, which have fallen to the lot of few individuals in any country, and that no less than seventeen or eighteen cases of it have come under my observation within that period, in all of which both my diagnosis and prognosis (with the single exception of the latter in the case under consideration) have unhappily been but too fatally verified, it is not, I trust, laying claim to too great a share of discernment to assert, that I could not easily be mistaken in a case of hydrophobia; and that I should consider my being so as unlikely, as that an experienced surgeon should ever confound two diseases, the most opposite in their nature—because, to an uninformed eye, they might both exhibit something of the same external appearance.

Farther, it has been usual with me, on the admission of a case of hydrophobia into the hospital, to send for some of my medical friends, not only that they might see a disease seldom occurring in private practice, but that I might have the benefit of their suggestions in regard to the treatment. On the present occasion, the promptitude necessary to the practice I had determined to adopt in the first case that occurred, and its astonishing effect in so suddenly and effectually subduing the disease, deprived me of the advantage I should now have derived in establishing the point in question, from the concurring testimony of a judicious medical friend. But though not permitted to give direct evidence as to the existence of the disease in the case above detailed, these gentlemen can yet vouch, that they were never called by me to see a case of hydrophobia in which there existed the slightest doubt of the nature of the disease; and it will hardly be contended that I was more liable to mistake it in this case, than on any former occasion.

If these facts and reasonings, combined with the account of the accident; the time that elapsed before the appearance of the symptoms; the statement given by the patient of the commencement of the disease, and by his friends, as to the state in which he appeared before he was brought to the hospital; the symptoms under which he laboured when he arrived there; should all be deemed insufficient to establish the real nature of the disease, I confess myself at a loss to conjecture what species of proof would be necessary for that purpose. The only defective point in the evidence appears to be our ignorance whether the dog by which Amier was bitten was actually mad or not; and though this cannot be proved by direct testimony, yet as it is known that the disease was prevalent among dogs about that time, as will be hereafter noticed, it is presumed that this is an objection of very little weight. If, therefore, any individual, after duly considering all these circumstances, still continue in doubt as to the nature of the disease, may it not, in conclusion, be permitted to ask him what disease it was, if not hydrophobia?

That the disease, whatever it might be, was removed, and that almost instantaneously, by bleeding alone, admits, in my mind, of equally little doubt.

In Mr Tymon's successful case, the symptoms only gradually disappeared, some of them remaining so late as the fourth day; and as opium, mercury, and antimony, had been largely used during the whole time, and the patient's system was evidently under the influence of the mercury, before he could be said to be free from the disease, an opinion might still be entertained, and actually was so, by many with whom I have conversed on the subject, that the cure was, after all, effected by the mercury, and not by the bleeding.

Dr Berry himself, to whose rare and laudable zeal for the promotion of useful science, even at the period of closing a long and honourable career of public service, the world is indebted for the knowledge of Mr Tymon's unprecedented case of success, alleges that the bleeding "saved Mason's life, by diminishing violent action, *and admitting the effect of medicines that in all former experience had uniformly failed.*"

As this notion too corresponds with the most prevailing theory of the disease, though that theory has not in a single instance been verified by the success of the practice to which it gave rise, I consider it of great importance to correct it; lest, by still expecting some good from mercury and opium in hydrophobia, the attention of the physician should be diverted from a sufficient abstraction of blood,—on which, and on which alone, as far as a single case can prove any thing, the life of the patient seems entirely to depend.

That the first bleeding in the case above related, wholly, though not permanently, removed every symptom of the disease, was proved, I presume, in the most ample manner, by the following six remarkable circumstances: 1st, the removal of the spasms; 2d, the freedom of respiration; 3d, the restoration of the power of swallowing fluids, and the absence of horror at their approach; 4th, the desire, instead of the abhorrence of a current of air; 5th, the inclination for a natural alvine evacuation: and 6th, the power of sleeping. All these unequivocal indications of recovery took place during, or immediately after, the first bleeding; and as none of them ever happened before to a patient in hydrophobia, except near the close of the melancholy scene, when they denote an entire sinking of the powers of life, rather than the cessation of disease, it seems but fair to ascribe them to a remedy, which had never before been used as it was on this occasion, or, if so, unluckily not at the time when it was capable of doing good.

When a recurrence of the disease was threatened in two hours afterwards, the power of the remedy was again conspicuously manifested, and a second bleeding *ad deliquium* instantly stopped the progress of the symptoms, and before a single particle of medicine of any kind had been given, permanently extinguished the morbid condition, whatever it may be, in which the essence of the disease consists.

These two points, therefore, appear to be fully proved, namely, that the disease was hydrophobia, and that the cure consisted in blood-letting alone.

But notwithstanding this unprecedented success, I am not so sanguine as to believe that venesection will cure every case of hydrophobia. It is probable that there is a period in the disease beyond which its curative effect cannot extend. What that period is, cannot be known without a more enlarged experience. But this very uncertainty affords only a more powerful reason for losing no time, in resorting to the copious abstraction of blood, upon the very first appearance of unequivocal symptoms of the disease, as the delay of only a few hours may prove fatal to the patient.

In referring to notes which I have preserved of fourteen cases of hydrophobia, I find that eight of the patients died within six hours after admission. In these I cannot believe that bleeding would have done any good. But of the remaining six who lived respectively 11, 13, 15, 20, 36, and 49 hours after admission, it is certainly reasonable to believe that it might have saved three or four. In a case so entirely hopeless, however, there could scarcely be harm to the individual, from trying it at any period of the disease. And as it is only by such trials that the real limits of its power can ever be ascertained to any useful purpose, it is rather desirable than otherwise, that they should be made. One disadvantage, however, eventually arising from such trials, requires to be guarded against. The medical profession, taught by innumerable disappointments, admit very cautiously the claims of any new mode of practice to general adoption. If several patients in hydrophobia, therefore, should happen to be bled in an advanced stage of the disease, and die—as they inevitably would do whether they had been bled or not,—such cases would be quoted against the new practice as failures, and might tend so far to bring the remedy into discredit, as to prevent its being used, even in cases where it might have proved the certain means of saving life.

I am the more desirous of noticing the unfavourable effect upon the adoption of the new practice, which may eventually arise from bleeding at too late a period of the disease, and of entering a strong caution against the hasty rejection of the remedy from such instances of failure, in consequence of the circumstance having very nearly happened to myself, only 3 days before the occurrence of the case of Amier.

On Saturday evening, the second of May, 1812, a native of Arracan, employed in Calcutta as a cook, was brought to the hospital, labouring under symptoms of hydrophobia. I went to him that moment, with the full determination of putting in practice the plan that had succeeded in the hands of Mr Tymon; but I found that the unfortunate sufferer had been ill, according to the account of his friends, for 56 hours. His pulse was imperceptible—his skin cold, and his features sunk. I therefore got him to swallow 100 drops of laudanum, which he effected, as frequently happens, with greater ease than is usual in an earlier stage of the disease; and ordered an enema with 300 drops. The patient was dead in half an hour. Now what I wish to impress upon the mind of the reader is—that if, in this case, the disease had been somewhat less advanced—the pulse still perceptible, and the strength less sunk, I should certainly have bled the patient;—which, at such a period, could scarcely have prevented death. It would more probably have appeared to have accelerated that event; and, if so, might consequently have had the effect of preventing my pushing the bleeding in the case of Amier to the extent necessary to the cure. I must therefore here insist, that numerous failures in an advanced stage of the disease, will form no just ground for the rejection of a remedy, which has been so incontestably proved to have cured the disease when used at an earlier period. As well might the practitioner reject bleeding in the commencement of peripneumony or enteritis in a robust athletic patient, because in each disease there is a period after which the detraction of blood, so far from curing, serves only to hasten the fatal event.

Nothing, however, can fix the real value of the remedy but experience. It is highly desirable that this may be speedily obtained; and as the disease does, and must very frequently occur in this country, whether we possess the means of curing it or not, we cannot doubt that but a very short time will elapse without further trials of this practice; and it may be presumed that the medical practitioners, who are so widely distributed throughout India, will fairly and circumstantially communicate to the public the result of their experience, whether attended with success or not.

It may be necessary to observe, however, that merely opening a vein and drawing a considerable quantity of blood is *not* the practice. The vein must be opened by a large orifice, the blood quickly evacuated, and allowed to flow, without regard to measurement, ad animi deliquium. Nothing less than this is capable of at once arresting the progress of the disease, relieving the spasmodic affection of the heart and arteries, suppressing excessive sensibility and irritability; and, in short, of admitting the restoration of that due balance of action and influence both in the circulating and nervous systems, on which the continuance of life and health seems to depend.

But I lay no stress on this or any other pathology of the disease. Well authenticated trials of the remedy in an early stage of it, are what I desire to see. If it fails in many of these, when used in the manner above proposed, within twenty-four, or, to speak with more latitude, thirty hours, of the commencement of the symptoms, I confess I shall feel much disappointed; and not a little mortified, to be obliged, after such fair prospects, to reject a remedy, which has effected twice, in the short space of seven months, what was scarcely ever effected before; and to class it with that useless farrago of remedies and practices, which, though used hundreds of times, and for a series of ages, have never once been known to accomplish a cure of hydrophobia.

With respect to the subsequent treatment of the patient, it is scarcely necessary to make any remark. The case clearly shows that for the hydrophobia no subsequent treatment was required. But as this and many other cases on record, show a great disposition to disordered and excessive action of the liver, it may perhaps hereafter be found useful to administer mercury, both as an evacuant, and to the extent of affecting the mouth, with or without opium, according to circumstances.

It is usual, when new and successful expedients are first promulgated, to wonder why they never were thought of before. In conformity to this habit, I have frequently, within the last ten days, been asked why, in a disease so often proved incurable by other means, bleeding was not before tried? The fact is, however, that *bleeding has often been tried.* But owing, probably, to the evacuation not being pushed far enough, when used in an early stage of the disease—or to the period for its beneficial employment having elapsed, before it was resorted to, the relation of the cases in which it was used afforded little or no encouragement to farther trials; while the theory that has prevailed for nearly a century in regard to the nature of the affection, and its classification with diseases of the nervous kind, accompanied by great debility, tended directly to discourage all lowering plans of cure, and to point out antispasmodics and tonics as the only resource in hydrophobia.

Dr Mead, who was very confident that he had found an infallible preventive of the disease, in *a little liverwort and black pepper*, aided by bleeding and cold bathing before the commencement of the course of medicine, says, "As to all other ways of curing the hydrophobia, I own I have not been so happy as to find any success from the many I have tried. Bathing at this time is ineffectual. *I have taken away large quantities of blood;* have given opiates, volatile salt, &c. &c. &c.—All has been in vain, *because too late.*" Notwithstanding his disappointment, he still concludes, "If any relief could be expected in this desperate state, I think it would be from *large bleeding even ad animi deliquium, before the fibres of the membranes have lost their natural force by convulsions.* But, after all, it will generally happen, that (as the Greeks said upon deplorable cases) 'Death will be the physician that cures.'" This, though a recommendation, was certainly no great encouragement to blood-letting.

The doctrines of Boerhaave also led him and his pupils to recommend and practise bleeding in hydrophobia. The celebrated Leyden Professor says, "The distemper is to be treated as one highly inflammatory, upon the first appearance of the signs which denote its invasion, by blood-letting from a large orifice, continued till the patient faints away; and soon after by enemata of warm water and vinegar," &c. &c.; and he adds, "that this practice is supported by some small number of trials." But the particulars of this successful practice are not given.

I find, however, a trial of it at Edinburgh, more than 60 years ago, by the late Dr Rutherford, a pupil of Boerhaave's, who took away *gradually* sixty-six ounces of blood from a patient, who had already been bled the same morning. As this patient lived forty-eight hours after the large bleeding, it is probable that it was used somewhat early in the disease, and should, therefore, it may be said, have succeeded. Why it did not, it is impossible now to tell, unless the word *gradually* may be thought to afford some explanation; but I am persuaded the circumstances attending its failure had great weight in deterring others from pursuing the plan recommended by Boerhaave; and in giving an entirely different direction to the practical views of physicians, on the subject of hydrophobia.

On the failure of bleeding in this case, Dr Rutherford, who then, with great reputation, filled the practical chair of the most celebrated school of medicine in Europe,—candidly retracted an opinion, which he had learned from Boerhaave, and which had directed the measures he took. He declared in his public lectures, that "he was convinced now, that the hydrophobia is a spasmodic and not a highly inflammatory disease. That though bleeding may be useful in preventing furiousness, neither that, nor the proper antiphlogistic method are to be depended upon as the proper cure of hydrophobia; that in such cases, after bleeding once or twice, he would order *sal succini, musk,* opium, and perhaps *blisters:*"—Thus, at once sending abroad into all parts of the world the opinion that large bleeding was useless in hydrophobia, and inculcating the use of antispasmodics only.

Dr Cullen says scarcely any thing on hydrophobia, further than that his chief reliance would be on mercury. Macbride asserts that "Doctor Nugent was the first that pointed out the true nature of hydrophobia—which before his time was generally considered as an inflammatory disease. Dr Nugent's patient was *largely blooded*, and took, moreover, large quantities of musk and cinnabar, as well as opium; and, towards the close of the cure, opium was given along with camphor, musk, and assafœtida. *But the opium is what we are chiefly to rely on.*"—Thus again withdrawing the attention of the practitioner from the large abstraction of blood, to which the cure in this case was most probably to be ascribed.

It is needless to multiply quotations to prove, that nearly the same opinion of the disease, and the remedies most applicable to it, have prevailed, with little variation, up to this day, with the single exception perhaps of Dr Rush, who, in consequence of his peculiar notions about inflammation, but which do not seem to be countenanced by the appearance of the blood drawn from hydrophobic patients, again inculcated the necessity of blood-letting. Recent experience proves, that he was right. But it is to be regretted, that neither the cases to which he refers for the success of the practice, nor his amended hypothesis of the resemblance of hydrophobia to malignant fever, were considered of sufficient weight to encourage its adoption by other practitioners.

Finding therefore so many authorities against bleeding in hydrophobia, and not a single cure fairly ascribed to it, (for no dependence can be placed on those vaguely mentioned by Boerhaave), it is by no means surprising that it should, for more than half a century, scarcely ever have been thought of as a remedy in this disease. I am aware that it has sometimes been used as an auxiliary, when the pulse has been full and the strength great, in order to render the patient more manageable. But as it has till lately never been employed as the remedy of sole dependence, nor applied in the manner necessary to produce a decided effect upon the disease, I confidently trust that its failure, nearly up to the present day, will not be considered as militating against the expectation of success, which I think we are now fairly entitled to entertain from its future employment.

It is at any rate highly encouraging to know, that, in the only three cases in which it has been trusted to as the principal or the sole remedy, it has succeeded to our utmost wishes.

The first case is that by Dr Burton in America, which was suggested by Dr Rush's lectures, and was published about seven years ago, in different periodical works. But unfortunately, in consequence of the case not being very accurately related, and its being combined with some fanciful theory, it does not appear to have been acknowledged as a clear instance of hydrophobia; and the benefit which might otherwise have been derived from it, was wholly lost to the world. Whether it was actually a case of hydrophobia or not, is not now worth disputing, being in possession of Mr Tymon's case, and of that which has given rise to these already too greatly extended remarks.

I cannot, however, conclude, without saying a few words on the practices which have been principally in use up to this time. Never having seen Dr Nugent's case,—the only instance of apparently authenticated recovery from hydrophobia with which I was acquainted, previous to these three, is one related by Dr Shadwell, in the Memoirs of the London Medical Society, in which, on the authority of a Greek Manuscript, oil was used both externally and internally. Relying on this example, I gave oil a very fair trial in several of the first cases that fell under my care. But, although I often got the patient to swallow a considerable quantity of it, and applied it frequently by enema, as well as to the skin by almost incessant frictions, it never appeared to do the least good. I therefore abandoned it.

I have subsequently used every mode of treatment that I have ever heard or seen suggested, with equally little success, except arsenic, which, though with no better hope, was to have been my next trial, had not Mr Tymon's case fortunately occurred, to point out the practice which has already so well justified the confidence reposed in it.

On those occasions, besides the full trial given to oil, I used opium to a great extent in every possible way; mercury, musk, camphor, blisters, galvanism, and enemata of laudanum, and infusion of tobacco, all to no purpose. Nothing ever alleviated a symptom except the two last, which certainly did lessen the spasms; and therefore, when bleeding may hereafter be used too late to succeed, I would recommend them as remedies, capable, though not of preventing death, yet of allowing the fatal event to take place with less suffering to the unhappy patient than any thing else with which I am acquainted.

On the recommendation of Dr Bardsley of Manchester, a gentleman who has, with unwearied zeal, endeavoured to investigate the nature of hydrophobia, with a view to the discovery of its cure, and even to the extermination of the disease from the United Kingdom, I also gave a very fair trial to volatile alkali. Contrary to all expectation, I succeeded in getting into the stomach no less than three drachms of carbonate of ammonia, made into boluses with crumb of bread. But the event was unhappily just the same as in all former cases.

Dr Bardsley was led to this suggestion by the perusal of Mr Williams's case of recovery from the bite of the *Cobra de Capello*, by means of *Eau-de-Luce*; and he endeavours to recommend its adoption by the following observation: " Surely, in the treatment of so fatal a disease as canine madness, it is proper to adopt any method of cure founded on RATIONAL PRINCIPLES. *Analogy, under these circumstances, seems to be our surest guide.*"

It is melancholy to relate, that though hydrophobia has been unusually frequent in England of late years, and many cases of it have been treated by the most eminent practitioners in London, both in hospitals and private practice, yet not a single case of recovery is recorded.

Dr Parr, author of the Medical Dictionary, published for the express purpose of exhibiting the state of medical science up to the present time, after telling that every thing has been tried, and that every thing has failed in effecting a cure, consoles his reader, by acquainting him with the infallibility of cutting out the part as a preventive, adding emphatically in Italics—" *In short, full, effectual, and* COMPLETE EXCISION *of the wounded part, is the only certain means of relief;* AND THIS IS CERTAIN." But still leaving us in the same hopeless condition as to any means of cure after the disease has actually taken place.

Doctor John Hunter concludes a most able paper on the history of the disease, and the trials made for its cure, with these words: " After the symptoms of hydrophobia have appeared, no medicine or remedy that has hitherto been used, has relieved, much less cured, the disease." And finally,

A well-informed anonymous writer, in the Medical Annual Register for 1808, after presenting a sketch of the practice that had been pursued in London during that year, and noticing the failure of every expedient, sums up his history with this opprobrious sentence. " On the whole, therefore, we may be considered as remaining in the most entire ignorance, both of the nature of the disease, and of the method of cure, or even of palliating a single symptom."

Such was the disheartening language universally held on the subject of hydrophobia. I humbly trust that it can be held no longer. That the case above related, coming so soon after that of Mr Tymon, entitles us to indulge more animating views for the future; and that it will not be long before additional experience shall serve to confirm the hope, which seems now to rest on so promising a foundation, that a remedy has at length been discovered for this hitherto uncontrollable disease.

It is mortifying to the pride of science to acknowledge it,—but if farther trials of bleeding *ad deliquium* shall confirm its power of curing hydrophobia when used early in the disease,—it is nevertheless impossible to conceal, that this *solum et unicum remedium* has apparently been hitherto overlooked, in consequence of an overweening fondness for system, which led medical writers to class hydrophobia with diseases of the nervous kind, and to dwell particularly on its resemblance to tetanus. That disease being considered as highly asthenic, blood-letting, perhaps without sufficient reason, has been thought inadmissible. Antispasmodics and tonics have been employed in all quantities and forms; and though by such remedies scarcely one case of tetanus in fifty have ever been cured, the same treatment has been, rather preposterously it should seem, transferred to hydrophobia,—because, under such hopeless circumstances, *analogy has been said to be our surest guide.* Whither has it guided us? Never certainly to a single cure of hydrophobia. It may, perhaps, with greater truth be said to have been an *ignis fatuus*, which has served to lead us into difficulties and dangers, rather than to conduct us into the salutary path of curative science; and that, perhaps, in more diseases than the one under immediate consideration.

After expressing so little respect for analogy, the professed guide of physicians, in the treatment of hydrophobia, shall I not be accused of inconsistency, or of indulging in notions of too speculative a nature, if I offer a hint that some use may be derived from favourite analogy, by pursuing it in an opposite direction; and instead of applying to hydrophobia the treatment which seldom succeeded even in tetanus itself, we now transfer to tetanus, and perhaps to other diseases of the same kind, the practice which has been incontestably proved, in two instances at least, if not in three, to have been successfully employed in hydrophobia?

Almost all authors have spoken of this analogy, and some have gone so far as to affirm, that tetanus may be easily mistaken for hydrophobia. I confess myself to be of a different opinion; being fully persuaded that no person, who has often seen both diseases, could ever mistake the one for the other, and that for the following reasons: First, in tetanus the lower jaw is immoveably fixed, and the patient speaks by the motion of his lips only, with a hissing kind of noise,—whereas in hydrophobia, the lower jaw is moveable to any degree; and is, in fact, in the exacerbations, almost in perpetual motion, often resembling the action of hawking or retching, for the purpose of bringing forward and expelling the viscid saliva, which constantly collects about the fauces: And, in the second place, that though the swallowing of fluids may be difficult or impossible in tetanus, and the attempt even accompanied with convulsions of the face, throat, and chest, yet the obstacle is confined to the actions connected with deglutition alone; and the name, the approach, and the touch of fluids have never, in my experience, thrown the patient into the agony of horror, distress, and despair, which is invariably witnessed in hydrophobia.

VII.

On the Introduction of the Depletory Method of Cure in Tropical Fever.

The Letter from Guadaloupe on yellow-fever, as well as its introductory one by Dr Cochrane, inserted in the last Number of this Journal, is obviously calculated to produce the inference of recent improvement, in the recommendation of the depletory treatment of that disease. Having been engaged in the naval medical service in the West Indies for many years previous to the arrival of Mr Parson, until a few months since, I feel naturally interested in the present assumed novelty of the subject, in as much as it tends to convey an imputation of preexisting inefficiency of practice in the public service in that quarter. With the view therefore of obviating an implication, liable to involve the discrimination of a considerable body of men, I shall present a brief statement of some collateral circumstances connected with the subject, for the consideration of those who may not possess the advantage of local information, as to the former and present extent to which the depletory practice has obtained in yellow-fever in the West Indies.

An ordinary acquaintance with the medical history of the West Indies, is sufficient to show, that blood-letting in the early stage of yellow-fever, possesses, at the present day, no claim to novelty; and in reference to the naval medical department in that part of the world, I can with truth assure Mr Parson, that the pathology of the disease has not been unattended to by his predecessors; that the causes of tropical fever have been anxiously investigated, and where practicable avoided; and farther, that its inflammatory nature has been long well understood.

In order that this statement may not rest on individual and anonymous assertion, I am enabled to refer to an official paper, issued to the medical officers of the Leeward Island squadron, about the period of Mr Parson's arrival in the West Indies, and of which he, in common with the other surgeons of the squadron, must have been in possession. Dr Dickson, the physician to the fleet, aware of the difficulties to which strangers are exposed, in the discrimination and treatment of tropical fever, presented the sum of his experience, in a printed circular address to the surgeons, dated January 1810, one month after the arrival of Mr Parson.—The treatment therein recommended is strictly depletory.

With this document alone before him, it is difficult to reconcile the character of implied improvement, which pervades the whole of Mr Parson's communication.

The individual treatment of fever within the tropics, will perhaps ever vary, from the influence of individual opinion, and the indefinite modifications of the disease. I admit that occasional deviations from the depletory treatment occur; but the instances have been for many years past so unfrequent, as not to affect the general practice. The result of my own observations, and of my inquiries into the opinions and practice of others, is, that the interruption of inordinate vascular movement in the early stage of yellow-fever, by the combined powers of bleeding, purging, and the affusion of cold water, has long formed the general indication of cure, and the practice, with few exceptions, in universal adoption.

It is extraordinary that, in stating Drs Jackson and Rush to be the only authors who have understood the proper indications and treatment of this fever, Mr Parson should not have recollected the prior authority of Moseley at least, who is so strong an advocate for this practice. Dr Jackson remarks, that "blood-letting has been long employed in the cure of fevers of tropical climates, particularly in the fevers of strangers." And Dr Rush distinctly quotes the authority of Dr Moseley, in support of his recommendation of blood-letting in yellow-fever.

Depletion has been very extensively employed in this disease, both in the army and naval hospital practice. I shall content myself with one instance of several years standing. Dr Rutherford, of the naval hospital at Antigua, (where this disease has proved particularly fatal), in 1796, observes, "The period of inflammation runs so rapidly into debility, that not a moment ought to be lost. The remedy that I have found most effectual, is immediate bleeding, according to the strength and age of the patient; numerous evacuations downwards, and a very large blister applied between the shoulders. The general rule is, when I have them in the early stage of the disease, (which I seldom have but when taken ill in the hospital), and the pain in the head is intense, to bleed until the patient tells you it is nearly gone."

The opinion of venous congestion in this disease, is to be found in Dr Lempriere's publication on yellow-fever in 1799, who considers this phenomenon as usually accompanying the state of predisposition, and characteristic of the disease itself.

I am happy to see that Dr Harness, in his letter to Dr Cochrane, has borne testimony to the general diffusion of the depletory practice in this disease, in the department over which he presides.

Sufficient proof has now, I trust, been adduced to show, that the practice is by no means in its infancy, nor the sphere of its exercise limited, and that any arrogation of praise for its employment at the present day, must necessarily fail in its object.

London, November 8th, 1812.

VIII.

On the Introduction of the Depletory method of Cure in Tropical Fever. By a Naval Surgeon.

Gentlemen,—Some observations upon the treatment of yellow-fever, which appeared in the last Number of the Edinburgh Medical and Surgical Journal, have induced me to transmit for your consideration a printed paper, circulated, a few years ago, among the naval medical officers on the Leeward Island station, by Dr Dickson, physician to the fleet there.

The high value of this communication, I doubt not will be duly appreciated, when the long and most extensive experience, as also the abilities of the author, are considered. I shall only remark upon it, that the treatment recommended is that which has, for some time, been very generally adopted by the naval surgeons in the West Indies. Perhaps I owe Dr Dickson an apology, for submitting to the public eye, without his knowledge, observations which were only intended for the perusal of the medical officers of the squadron; yet, considering the publicity of their original form, the manner in which they came into my possession, and, particularly, the benefit that may be derived from a wider diffusion of them, I hope there will appear sufficient justification of my conduct.

While I am on the subject of yellow-fever, I shall take the opportunity of saying a few words, (which it was not my intention, otherwise, to have done), on Mr Wilson's "Reply to a Naval Surgeon," Vol. VII. p. 280 of this Journal.

From the remarkable difference of event between the fever of the Hussar, as stated by Mr Wilson, and the *yellow-fever*, as I myself had seen it in the West Indies, as well as from the difference of the causes,—the one being the offspring of contagion, the other (as I conceive) never produced by this agent,—I was led to conclude that Mr Wilson had *misnamed* the disease he treated;—calling, by the name of yellow-fever, an infection of a much milder nature than the disease known by that appellation in the West Indies. This, my opinion, I stated in p. 20 of the same volume, in terms which, I can safely say, were not intended to convey offence, and which, upon reperusal, seem to me quite incapable of conveying it. At this statement, however, Mr Wilson has taken great offence, and has not only attempted to confute it, but has called it "an unfair and cruel attack, questioning his honour and veracity."

Admitting my real opinion to be, what it most assuredly was, and is, (no matter on how just grounds this may have been adopted), that *yellow-fever* is *not* contagious, and that the fever of the Hussar *was* contagious, surely the simple process of a syllogism must justify me for having drawn the conclusion I did, respecting the nature of that fever. Whether Mr Wilson, in his "Reply," has adduced any thing to confute my opinion, or whether he has not afforded farther materials for confirming it, shall be left to the discernment of his readers. Considering only at present the question of contagion, it may be affirmed, that, if the yellow fever *is* contagious, the fever of the Hussar *may have been* the yellow-fever; if it *is not* contagious, the fever of the Hussar *was not* the yellow-fever. What result knowledge and experience will deduce from this simple view of the matter, I shall not positively state, though I cannot doubt. Nor shall I attempt to prove the truth of my opinion respecting the non-contagion of yellow-fever; an opinion which Mr Wilson has (perhaps somewhat unfortunately for his character as a medical scholar) been pleased to consider as maintained, "not only without evidence, but in the face of all evidence." Indeed, did not the many publications that treat of this subject, and particularly the late most valuable and most powerful essay of Dr Bancroft, render this totally unnecessary, I am too well convinced of the obstinacy of long-established habits of thinking, and of the general inutility of medical controversies, to hope that any benefit would be derived from the attempt. I shall, therefore, neither solicit, nor reply to, any further communications on the subject. If my opinion is true, it will ultimately triumph: if it is false, it will neither require the talents of Mr Wilson to make it fall, nor live any longer by my efforts to support it. In taking my leave of Mr Wilson, however, I cannot help expressing some surprise, that a gentleman who has shown such exemplary candour as to confess that he was *deceived* in attributing the favourable result of his cases chiefly to medical treatment, should have shown so little moderation in the reprehension of a brother-officer, whose only severity towards him consisted in stating, that "his judgment lay under the imputation of *inaccuracy*."

At Sea, 1*st November* 1812.

Extracts from a Circular Letter to the Surgeons of his Majesty's Ships and Vessels on the Leeward Island Station. By J. H. Dickson, M. D. Physician to the Fleet.

"*His Majesty's Ship Pompee, Leeward Islands*, 1*st Jan*. 1810.

"Believing that the medical officers of the squadron are fully aware how many lives depend upon their knowledge and discrimination; what gratification arises from success, and what heavy responsibility attaches to omissions, which too often cannot be retrieved; I trust it is unnecessary for me to animate their zeal by representing how much may be done, by energetic and judicious practice, in the early stages of diseases, in this country, and particularly in the rapid and dangerous Caribbean Fever. Anxious to guard from the extremes of overweening confidence, and a want of proper reliance on the resources of the medical art, while I warn them of the untractable nature of the disease with which they have to contend, I could, at the same time, bring forward much incontrovertible evidence to prove, that, by attention, not only their own health is in no danger, but that the health of those under their charge may be preserved to an extent far beyond what they have been led to believe, or expect: But my object is to excite to vigilance, not to lull into security." "For the benefit of the unexperienced, I think it necessary to make some remarks on the treatment of fever, referring occasionally to the best authorities on the points in question; but taking it for granted, that the relative opinions of those who have written professedly on tropical diseases, are perfectly known and understood, and, therefore, do not require being adverted to in this paper. The most powerful means with which we are acquainted for cutting short, or changing those morbid actions which constitute fever, consist in blood-letting, purgatives, and the cold affusion. The propriety, quantity, and repetition of the first, will depend upon the strength and fullness of the vascular system; the oppression of the sensorial and other functions; the youthful and unseasoned constitution; the effects during, and after the abstraction; the ardent nature of the fever; and, above all, upon the short duration of the disease. On the contrary, its employment will be more sparing, equivocal, or altogether prohibited, in the weakly, aged, intemperate, long assimilated, or previously diseased habit; and, especially, in an advanced stage of the complaint. Systems vary so much in their powers, and fevers in degree, that it is evident no rule can here obtain universally. There cannot be a doubt, however, that the efficacy of this remedy will greatly depend upon its being used as early as possible, particularly within the first twelve hours; and, although it may sometimes be extended to double that period, or even farther, yet I would here be understood to speak with great limitation and caution; because its too late, or injudicious employment, will infallibly hasten dissolution. Under the circumstances which I have mentioned as most favourable, this remedy should be copiously used, and may be repeated according to its good effects; but these, I repeat, will much depend upon its being resorted to before the chain of febrile actions is completely linked; and especially before the stomach and small intestines have suffered in structure or organization.—(Without enumerating an host of authorities, the reader is here referred to Dr Clutterbuck's very excellent observations, and to those which he has collected in his "Inquiry into the Seat and Nature of Fever;"—to "Researches Anatomical and Practical, concerning Fever, as connected with Inflammation," by Dr Beddoes, where this subject is farther, and, in some respects, differently illustrated;—and to some Comments and Communications, in the recent periodical Medical Journals.)

"The free exhibition of purgatives, in the beginning of this fever, is indispensably necessary, and frequently, from the torpor of the bowels, they must be given with a liberality that might appear alarming in more temperate climates. They ought to be repeated, and, if necessary, assisted with enemas, until they have produced at least five or six copious evacuations. I cannot here too much press upon the attention the importance of the thorough evacuation of the whole of the intestinal canal, during the first hours of fever, and the danger of trusting, in this respect, to the report of the patient, or even of the attendants, without minute and satisfactory inquiry. The best purgatives are cathartic extract, jalap, &c. combined with calomel; and sometimes the stomach will bear the neutral salts: But those medicines ought always to be preferred which are least likely to be rejected. Where early evacuations are of so much consequence, calomel, which is a most useful addition to other purgatives, should never be trusted to alone, from the uncertainty of its operation, particularly where there is much heat and febrile action. The bowels should be kept freely open during the whole period of the disease, but they should not be too much excited during the latter stage;—a distressing diarrhœa, or constant attempts at evacuation, with tormina, &c. being a most harassing and unfortunate occurrence late in the disease.

"Much that might be requisite to be observed on the preventive and curative effects of purgatives, and upon the febrifuge powers of the cold affusion, is rendered unnecessary by the very estimable works of Hamilton and Currie, with which every surgeon is supposed to be intimately acquainted. The efficacy of the cold affusion in destroying, deranging, or lessening febrile action, by the shock it occasions; by reducing the vascular system, and the energy of the brain; and by subducting morbid heat, ranks it very high as an auxiliary in the cure of fevers. That it here exerts eminent febrifuge and soothing powers, is most evident; but these are often rendered transitory, and sometimes even inadmissible, from the formidable nature of the disease, or an unfortunate concatenation of circumstances with which we have to contend.—(Besides other authors who have written from an acquaintance with yellow-fever, I here particularly refer to the original observations in the works of Dr Jackson, and especially to his late "Exposition of the Practice of Affusing Cold Water on the Surface of the Body, as a Remedy of Fever.") The momentum of the affusion, regulated by the earliness of the disease, and the strength of the patient, should be considerable, when these will permit. The frequency of repetition will depend upon the effects resulting, and the recurrence of reaction, heat, &c. The benefit to be expected from the shock will almost wholly depend upon its being given before the fever is fully formed; but, although this is the case, the affusion, in a less powerful degree, should be assiduously repeated, at such intervals as the symptoms of reaction indicate; and, when the vital powers become much impaired, gentle aspersion, or ablution, will produce grateful and soothing effects, and dispose to sleep, when the patient is heated, restless, or delirious. These will be farther promoted by cold applications to the head, after cutting off, or shaving the hair; or, as the head is more accustomed to changes of temperature, it is probable that greater effect will be produced by the application of cloths wet with spirituous or aqueous fluids, to the epigastrium, or other sensible parts; and when there has been much anxiety and heat, I think I have occasionally seen much relief from this practice.—(Amongst others, see Dr Stock on the Effects of Cold; the Edinburgh Medical and Surgical Journal, Vol. II., and Dr Bateman's Report in the same work, for July 1807.) A partial moisture upon the upper parts of the body, if the skin is hot, should not prevent the use of the cold bath, particularly in the early stages of fever. Abstaining here from any disquisition upon the comparative merits of the cold affusion, and general spirituous refrigeration, as foreign to a relation wholly practical, I shall be glad to receive any observations upon this subject, which are the offspring of experience. Upon the spiritus ætheris nitrosi, which is an excellent medicine, the effervescing draughts, and some other prescriptions, which are occasionally useful in this disease, I think it unnecessary to make any remarks. Having noticed those agents which have the most powerful influence on the course of fevers, and which are the most likely to induce a state of the system favourable to free and general perspiration, it is of great importance to observe, that, if these fail, this desirable event cannot be brought about by any forcing medicines whatever, such as antimony, opium, or other nauseating preparations; all of which, I conceive, are highly improper in this disease. Whilst I have seen no satisfactory evidence whatever in support of this practice, I think it sufficient reprobation to observe, that painful ought his feelings to be, who, without any adequate end in view, has persisted in exciting an irritability of stomach, which no art has been able, subsequently, to allay.

"Were it proper to allow theory to assume the language of experience, or did I treat of any other than the most formidable of diseases, I should sanguinely predict, that, of all the measures which are likely to free the body from fever by copious perspiration, the greatest benefit, after adequate reduction of the vascular system, may be expected from the very ingenious and efficacious vapour baths, which are now directed to be furnished to the naval hospitals on this station. The powers of this herculean remedy, in a variety of complaints, it is not, at present, my business to consider. But in the premonitory symptoms, preceding the invasion of active fever, as well as under circumstances, and in stages of this disease where the cold bath is inadmissible, very great advantages are likely to be derived from the administration of the vapour baths, which, to use the language of many eminent physicians who have examined their construction, possess such "a degree of efficiency, accuracy, and variety of application, that there are few diseases in which they may not, at some stage or another, be useful; and, in the prevention of disease, as well as during the periods of convalescence, they will also produce effects highly beneficial."—(Vide "An Improvement in the Mode of Administering the Vapour Bath," by the Honourable Basil Cochrane.)

"If bleeding, purging, and the cold affusion, which mutually assist each other, have been vigorously employed before the fever is fully established, there is great reason to hope that the danger of the second stage will be averted, and the most unpleasant symptoms diminished, within the first twenty-four hours. The young practitioner is here, however, very apt to be deceived. It is very necessary to caution him against the appearance of a deceitful lull, which, like the calm preceding a storm, is often witnessed about this period, and to recommend his watching the disease with the most assiduous attention. If the patient is really better, the pulse and skin should not only become more natural, but the most distressing and unpleasant sensations should be much relieved, and his feelings altogether much more comfortable. If, on the contrary, an evident change or amendment is not perceived in the course of the second day, or if, after an apparent remission, the symptoms become aggravated, with anxiety, sighing, restlessness, nausea, or a particular disagreeable sensation at stomach, the worst is to be apprehended, and every exertion used, by mitigating the heat, general irritation, and particular symptoms as they rise, to avert that state of fatal irritability, and disorganization, which may be expected to supervene. The means employed in the first stage having failed to cut short the fever, we can now only hope to counteract or arrest the fatal changes taking place in the stomach or viscera, by early recourse to blistering, and the internal exhibition of simple, but powerful stimuli, as carbonate of ammonia, capsicum, wine, if not nauseated, spices, &c. The carbonate of ammonia, in doses of six or eight grains, made into pills, and given every two or three hours, is highly recommended by Mr M'Arthur, late of the Naval Hospital at Barbadoes, whose great practical opportunities necessarily give his opinions the greatest weight. The capsicum given the same way, (and, also, under the form of what is called pepper-punch), has likewise been found highly useful, and is extolled for allaying vomiting, by several West India practitioners.—(*Vide* Med. Facts and Obs. Vol. VII.; Medical Communications, Vol. II.; Dr M'Lean on the fever of St Domingo; the New Dispensatory, &c.) When we apprehend the approach of vomiting, and other dangerous symptoms, these remedies are immediately to be employed, without being deterred by the fever that may be present; for it is evident, that if we wait for the reduction of heat and vascular action, previously to the exhibition of stimulants, they will too frequently not be employed until the very changes we wish to prevent have taken place, and the patient is sinking into the grave. To prevent the inverted action of the stomach, which is of great consequence and difficulty, should farther be attempted, by giving frequently a table spoonful or two of arrow-root, or some other gelatinous or mild agreeable matter, according to the patient's fancy, but so little, and often, as equally to avoid total emptiness, or offending the stomach by quantity or quality. I have seen a few instances where, by such attention, day and night, the fatal event was protracted to double the usual period, and vomiting altogether averted; and I have the gratification of knowing that several have recovered from the greatest debility by this kind of nursing, long after medicine had no farther power to save.

" Referring for a detail of the less pure, mixed, and anomalous shapes, under which this disease appears, from various modifying circumstances, to Drs Jackson, Rush, Moseley, Blane, Chisholm, and other writers on the yellow-fever, it will appear, from the plan of treatment here laid down from experience as the best, that I consider this fever, in its simplest and legitimate form, (viz. as it attacks the youthful plethoric stranger, after exposure to strong exciting causes), as highly inflammatory in the first stage, with great determination to the stomach, viscera, and brain, which, if not immediately remedied, becomes a specific inflammation, running into organic disease of those parts, of the most destructive and irremediable nature, and terminating rapidly in disorganization, gangrene, and death. It is, therefore, evident, that the result will greatly depend upon reducing increased vascular action, and the energy of the brain, and fully evacuating the whole intestinal canal, in the first, and thus averting the danger of the second stage, by the above powerful remedies; and in proportion as these have been early and judiciously employed, may we look for success. When this fever has been neglected or feebly treated at first, or the surgeon, lulled by the insidiousness, or unacquainted with the power and rapidity of the disease, has been induced to remit his vigilance, the patient is too often lost, before he is aware of his danger:—*what is to be done, must be done quickly*. From the above view, also, the frequent fatality of this fever will excite less surprise, particularly when we reflect how frequently inefficient are the powers of medicine to arrest the progress of even the milder fevers of temperate climates, when fully formed; a truth which every man of experience must acknowledge, and which is demonstrated by Dr Brown's Exposition, in the Annals of Medicine for 1802.

" The mercurial plan in Caribbean fever, has very repeatedly had the fullest trial; and the utmost I can say is, that I have seen it succeed sometimes in certain low, mixed, protracted cases, where fever had almost, or totally ceased, yet the brain, &c. remained affected or oppressed; but I have great doubt, and some of those most conversant unconditionally deny, that the ptyalism can be excited during the existence of increased heat, and febrile action; and hence it is inferred, that it is not the cause, but simply an indication of the cessation of fever."

IX.

On the Brain Fever produced by Intoxication. By John Armstrong, M. D. Sunderland.

There is an interesting disorder of the brain, the effect of intoxication, and which deserves infinitely more attention from the Faculty in general, than, as far as I know, it has hitherto received. In 1801 Dr Pearson, late of Newcastle-upon-Tyne, published an account of what is commonly called the brain-fever in that town and neighbourhood, in a small tract which he circulated amongst his friends and acquaintance. To this sensible tract I was first indebted for any thing like an accurate description of the disease; since that time, however, I have frequently met with it in practice, and shall now proceed to state my own observations on the subject, but, at the same time, avail myself of whatever is of practical importance in Dr Pearson's paper.

This disease, which I shall continue to designate brain-fever, is preceded by restlessness, defective recollection, paleness of the face, and slight tremors of the limbs; by anxiety, and irregularity of thought. At first the patient's slumbers are short, and interrupted by frightful dreams; but he soon becomes watchful, and passes days and nights without sleep. He dislikes to be alone; and if his friends leave him in private, he is clamorous till they return, or goes about the house in search of them. His appetite is considerably diminished, and he frequently loathes the very sight of animal food. He is more especially sick at the stomach towards the morning; he often vomits his breakfast; and the slightest exercise, or agitation of mind, produces perspiration. As the complaint advances, the skin becomes hot and dry, the tongue parched, and the pulse weak and rapid. The surface of the body, however, soon grows cooler, and is covered with sweat, and the tongue puts on a cleaner appearance; but the irregularity of mind increases; the patient imagines that his friends are all conspiring against him, or that they have suffered some great misfortune, in which he is himself deeply implicated:—at other times he supposes that his chamber is haunted by spectres, and furiously calls for assistance to drive them away; or supposes that he is in a prison, and that his friends have all deserted him. Sometimes, however, he is in high spirits, laughing and talking by turns incessantly. Occasionally, too, he converses with the medical attendant about his ordinary business, with apparent precision; tells him that he has been continually engaged, and walked or rode to several places in the neighbourhood, since he last saw him, when, in reality, he had never left his own room:—at the next visit he mistakes the physician for some other person, and loads him with abuse. If any one happen to contradict him, he most pertinaciously adheres to his opinion, and becomes highly indignant. If he be soothingly dealt with, he will sometimes answer questions readily and distinctly; but if many interrogations be put to him in succession, he grows confused, and relapses into delirium.

The symptoms already described continue more or less urgent for four, five, or six, and seldom longer than ten days. If the patient falls into a sound and tranquil sleep he generally wakens refreshed and collected, and from that time recovers rapidly: but short disturbed slumbers, accompanied with subsultus tendinum, from which the patient starts with affright, and then falls into a low muttering delirium, are amongst the most dangerous indications. I have seen one case accompanied by convulsions from the very beginning of the disease; but they were speedily subdued by a large dose of æther, and the patient recovered very well.

This kind of brain-fever is distinguished from typhus by not being contagious; by having no petechiæ, or cadaverous smell;

by the delirium attacking the patient more suddenly, and continuing with more impetuosity; by the heat of the surface of the body not remaining permanently above the natural standard; and by there being less prostration of the muscular powers in the commencement of the complaint. It is known from inflammation of the brain, by the more moderate degree of fever; by the absence of turgescence and redness of the eyes, and impatience of light; by the paleness of the face, and weakness of the pulse.

Out of ninety-three cases, as reported by Dr Pearson, which were treated by him with wine, opium, and an invigorating diet, not one terminated fatally; and he further observes, that, when a contrary mode of treatment has been attempted, few have recovered. I must not, however, conceal, that my own practice, though founded upon the same principles, has been much less successful than Dr Pearson's. Out of fourteen patients that I have attended in this disease, eleven recovered, and three died; but two of the latter were old infirm men, who had long drunk spirituous liquors to an enormous excess, and the third was a young man, who, for some years before his death, had seldom been a day sober. Among the most alarming symptoms may be enumerated a small, rapid, intermitting pulse; cold clammy skin; perpetual delirium and watchfulness, or, as already observed, short disturbed sleeps, from which the patient suddenly starts with fear, and mutters incoherently; constant vomiting of food and wine, followed by a coffee-coloured fluid; subsultus tendinum; visual deceptions, more particularly when the patient declares, upon any thing white being shown to him, that it is spotted or striped; or when he imagines that vermin crawl over the bed, and constantly endeavours to pick them off; or when he frequently puts out his hand, as if to catch something floating in the air before him. When such symptoms continue to increase, he at last sinks quite exhausted, or dies suddenly in convulsions.

About forty or fifty drops of laudanum should be administered on the first attack of the disease, and repeated in doses of twenty-five drops every five or six hours, till rest be procured. An ingenious friend of mine, who has seen much of this disease, always combines small doses of æther with the laudanum, which he has found an efficacious method of treatment. I have myself witnessed its good effects in three severe cases, and have reason to think that it is an improvement upon the practice here recommended. The common drink of the patient may be barley-water, agreeably acidulated with lemon-juice. From a pint to a bottle of Madeira wine may be allowed in twenty-four hours; regulating the quantity, however, by the state of his constitution and previous habits. Fresh ale or porter may also be moderately allowed him, and, in addition, the system must be supported by strong beef-tea and nutritious soups. Madeira is preferable to any other wine, because it rests better upon the stomach, and, in general, restores the tone of that organ in such cases, better than any other stimulus. Coercion must never be used; on the contrary, the feelings of the patient must be soothed by the kindest attentions; and he must be permitted to walk about the house, or even into the open air for a short time, if he desire it, provided the weather be sufficiently temperate. Venesection is almost invariably inadmissible, and, perhaps, highly dangerous in every case of the kind; at least I have known some instances in which it was attended with fatal consequences. Blisters never do any good, but generally harm, from the irritation which they excite. Drastic purgatives, and even mild aperients, in general, must be avoided in the commencement of the attack; but when the patient has once obtained refreshing sleep, the latter may be administered with safety, and even advantage; but the former must never be given in this disease.

In this paper I have purposely avoided offering the least remark on the proximate cause of brain fever, because I have never had an opportunity of examining the body of any patient who died of the disease; and because I do not like to rest medical reasonings on partly conjectural grounds, but upon broad and substantial matter of fact alone. The exciting cause, however, admits of no dispute. It is invariably intoxication; though its effects are produced at different periods in different individuals. Some cases, for example, I have seen, in which the complaint did not occur till two or three days after the debauch; but in by far the greater number of instances this was not the case; the disease, in general, being the most immediate consequence of inebriety.

Wearmouth Walk, Sunderland,
November 13, 1812.

X.

On the Nature of the Disease affecting Persons employed in Silvering Mirrors, described by Dr BATEMAN, *in the Report of the Carey-Street Dispensary for July* 1812. By EDWARD PERCIVAL, M. D. Dublin.

IN perusing the Quarterly Report of the Carey-Street Dispensary for July 1812, my attention was particularly drawn to some observations of the ingenious writer, on a disorder which he ascribes to "the effects of the poison of *mercury* on the constitution." The cases which occurred to him, were of two persons employed in "silvering mirrors;" one of which he details with much discrimination. The striking resemblance of this disorder, in its leading features, to that of the painters' colic, induced me to examine more narrowly into its origin and history. The first analogy is obvious, in the common source of both disorders from metallic poison. The amalgam used in the silvering of mirrors, notoriously contains *lead*, and often in considerable portions, combined with the mercury and tin. In truth, the quicksilver of commerce is always alloyed with lead, which is often fraudulently added for the purpose of augmenting its bulk. Now, in medical practice, we are scarcely less acquainted with the noxious effects of lead on the constitution, than with the harmless consequences of mercury, when it produces only an ordinary salivation. There are indeed anomalous cases of constitutional injury sustained by the use of mercury; but the character of these cases is widely different from those described by the Reporter of the Carey-Street Dispensary. It is not unreasonable, therefore, to exonerate mercury from the imputation of having occasioned the disorders which he details. Tin, in its ordinary metallic state, is well known to be an inert material, even when taken into the stomach in considerable doses. Lead, however, is an universal, though I know not whether it be an essential, constituent of the amalgam used in silvering mirrors. It cannot, therefore, be uninteresting or uninstructive, to pursue the inquiry, how far the poison of lead may have been instrumental in generating the morbid symptoms described by the Reporter. It is of so much consequence, both pathologically and remedially, to ascertain the real source of any apparently new or anomalous disorder, that I shall offer no apology for citing to my present purpose a case of painters' colic, which occurred to me a few years ago, at the County Hospital of Hampshire.

George Stevens, coach-painter and varnisher, aged 33, of middle stature, and formerly of muscular habit, applied to me to become an out-patient of the hospital, on the 11th of October 1808. The friends who brought him reported to me, that seven months ago he was seized with what they termed a fever, which confined him to his bed for some time; but as he had then no medical attendant, I could learn no further particulars of his case, than that his fever was succeeded by great weakness, and wandering spasmodic pains of the abdomen, and especially about the umbilical region. These pains have continued with occasional intermissions to the present period. He is now affected with spasmodic or convulsive motions of the body. Any voluntary effort to move his limbs, or even to speak, excites a great agitation of his frame; and the effort of volition is rarely obeyed, except as it were by accident, in the general struggle occasioned by his mental intention. The movements of his limbs are so uncertain, that he can neither stand nor walk alone; and, when seated in a chair, he sometimes remains still for a few minutes, then starts up in a rigid posture, which is succeeded by a general tremor, and often terminates in a flood of tears. He sometimes talks calmly and rationally; at other times he appears bewildered; his countenance manifests great anxiety, and his words and gestures are perfectly incoherent and unintelligible. He complains of violent pain in the occiput, frequent spasms of colic, and considerable distress in the lumbar and umbilical regions. His bowels are much constipated, hard, and distended, and he has frequently passed nine or ten days without evacuation. His urine is sparing and high-coloured; tongue very foul; pulse rapid and irregular; his flesh is greatly reduced, and he is averse from all food.

I directed a very active exhibition of scammony and calomel for several days, which expelled an incredible quantity of foul and fetid feces, and occasioned a rapid and decisive amendment of all the morbid symptoms. In order to relieve the pain at the occiput and spine, I directed a blistering plaster to the nape of the neck, and between the shoulders, and kept a part of the vesication discharging for some days.

On the 18th, my patient was nearly free from all his pains and spasmodic affections; his belly was loose and regular; his urine natural; his pulse not exceeding the ordinary standard, and without remission or irregularity. His intellect was clear, but his spirits were irritable and desponding; his strength was greatly impaired, and his appetite had not yet returned to him. He now derived great relief from the warm bath, which especially aided the solution of his bowels. His evacuations still indicated from time to time a morbid state of the viscera; and regarding this as the chief source or proximate cause of his malady, I pursued the use of mercurial purgatives alternately with infusion of senna, &c. until his mouth was slightly affected. On the 24th, my patient assured me that he had no pain or uneasiness in any part of his body; his countenance had resumed its healthy aspect; his appetite and sleep were natural, and, excepting a certain degree of weakness and dejection of spirits, he might be pronounced wholly recovered.

He now took decoction of bark with acid of vitriol; and on the 29th of October (18 days after his first application to the hospital) he was discharged from the books, cured.

To this narrative I shall beg leave to subjoin the following description of one of the cases which occurred to the Reporter of the Carey-Street Dispensary. My readers will judge of the analogy or rather strict resemblance of these morbid histories.

"The principal affection under which the patient laboured, was a sort of rapid convulsive agitation of his limbs (whenever the act of volition was exercised upon the muscles) which moved the extremities quickly in all directions, except that which the will prompted. Then he would sit on his chair still, and nearly unmoved; but the moment he got up and attempted to walk, his legs began to dance as it were in spite of himself, and performed very rapid and irregular motions, with so much violence, as to compel him to drop on his chair again, or to throw him down. Somewhat similar motions were performed by his arms. He was under the necessity of being fed like a child. His articulation was also rendered somewhat indistinct. These spasmodic tremors were greatly increased by any circumstance that agitated his mind, or occasioned any anxiety. His bowels were constipated, and he complained of much pain in his limbs and loins; which, together with the muscular agitations, rendered his sleep very imperfect; he frequently awoke starting and frightened, and was troubled with incessant unpleasant dreams. The appetite was good, and the pulse apparently natural, although it was at first difficult to ascertain its beats, in consequence of the tremor of the tendons, which came on when his attention was directed to his arm, for the purpose of feeling the artery. He complained of a general sense of great debility, and of being startled and flurried by slight causes."

The leading features in common to this and the preceding case, are, constipated bowels, acute pains in the lumbar and abdominal region, severe and irregular spasmodic affections of the limbs, absence of voluntary power over the muscles, morbid imaginations, great debility, preternatural anxiety and irritability. The different conditions of the appetite and the pulse, joined to the mental aberrations in the one case, seem to point it out as more severe, and probably of longer standing than the other.

The Reporter of the Carey-Street Dispensary observes, on the case which he relates, that "many instances of this state of body, induced by an impregnation of the system with *mercury* in various artisans, but especially in water-gilders, as they are called, and in persons occupied in the mines which produce mercury, have been recorded, and are familiarly known to practitioners in large towns." The cases to which he alludes, are entirely confined to miners and manipulators of mercury in its natural and impure state, considerably adulterated with *lead*. Whether mercury, in its fluid form, has any agency in facilitating the admission of this alloy into the human system, I have no means of conjecture; but it is more than probable, that, when amalgamated with tin and *lead*, it may procure for the latter a more ready access to the absorbing vessels, when exposed directly to their action. Mercury, when purified by the process of distillation, and rendered officinal, is daily exhibited to such a multitude of people, in so great a variety of preparations and doses, and under circumstances of constitution, climate, and regimen, so incalculably diversified, without producing any of the morbid symptoms above detailed, that it is no unfair conclusion in its favour, that these symptoms are to be referred to another cause; whilst, on the other hand, the effects of the poison of *lead* in any of its preparations, and in very trifling doses, are so precisely similar to those which the Reporter ascribes to "*mercury*" in its alloyed state, (as discovered in mines, or employed in the arts), that I cannot hesitate in referring to this alloy of *lead* itself, the morbid affections which he has so carefully detailed.

With respect to the paralysis which sometimes supervenes on the painters' colic, proceeding from the poison of *lead*, it may be remarked, that the loss of power and motion is rarely as perfect in this disorder as in injuries of the head or spine; that it seldom occurs on the first or even second attack of the disorder, but generally results from repeated or long-continued exacerbations of that morbid spasmodic condition, which the Reporter and myself have described in each of our cases. I advert to this fact, more particularly, as the former, by overlooking it, seems to have been misled materially in some of his pathological speculations.

In a remedial point of view, it is peculiarly important to ascertain the source and nature of the malady which is under consideration. In my own view of its indications, *active* and *copious purging* is the sheet-anchor of our reliance for a speedy cure. In mild cases it has happened, that a remission of the employment, or other circumstance that occasioned the disorder, aided by time and gentler laxatives, have effected durable relief. But, according to my own experience, a free exhibition of the more active purgatives, combined with preparations of mercury, even to the extent of affecting the patient's mouth, has proved the only immediate and eventually perfect remedial method. If it be imagined, however, that "the poison of mercury" is in any way concerned as a cause of the disorder, the use of calomel or the blue pill will in consequence be interdicted, and the patient will thus be debarred from the most propitious means of his safety. Of the efficacy of "electricity" as an antispasmodic, or of "sulphur" as a real or supposed antidote to "the poison of mercury," I have no direct experience; nor should the desultory authority even of great names be lightly used in commendation of agents so fanciful and equivocal. Mr Pearson advises "a free exposure to the open air, during a dry state of the atmosphere;"—a recommendation of unquestionable propriety in almost every chronic ailment of the human body. With respect to "bark and chalybeates," I believe no case is on record of their efficacy during the severer stages of the disorder; but when time and nature have effected half a cure, and wasted half of the constitutional powers, these auxiliaries may be of considerable benefit.

The candid Reporter, whose case I have already extracted, observes, that he exhibited "sulphur freely, combined with salts, and afterwards with bark, mineral acids, and chalybeates, in two or three forms; but no very speedy *relief* or *alteration* was obtained." One of his patients "thought himself better" when he began to take steel; the other "found himself most sensibly relieved, in respect to his general feelings, by the sulphur and salts, which acted as *laxatives.*" At the end of *two months*, however, he remains affected with a slight degree of the disease, "which becomes considerable, whenever any thing occurs to produce anxiety."

In the case of George Stevens, which I have detailed in a foregoing part of this communication, the malady had probably existed for the space of seven months, and then appeared under its severest form. In the course of seven days, he was nearly free from all pain or spasmodic affection; in six days afterwards he was convalescent; and on the fifth morning following, was discharged cured.

Dublin, Nov. 6th, 1812.

XI.

Reply to Mr Field's Justification of the Apothecaries' Company, in Regard to the late London Pharmacopœia; addressed to the Editor of the Edinburgh Medical and Surgical Journal. By RICHARD PHILLIPS, London.

SIR,—I have perused, in the last Number of your Journal, a letter from Mr Field, in answer to some animadversions upon the conduct of the London Society of Apothecaries, of which he has long been an active and respectable member; and as the opinions, which it is the object of his communication to refute, were deduced from statements made by me, I confide in your candour to insert a few observations, which I feel myself particularly called upon to offer. You will, I doubt not, admit with me, that it is of importance to controvert errors proceeding from authority so considerable as that of Mr Field; and considerable his authority must be esteemed, when it is known that he was one of the most distinguished contributors to the late reformation of the Pharmacopœia Londinensis. But these are not the only circumstances which render Mr Field's opinions worthy of particular attention. He is, as he informs us, one of the superintendants of the concerns of the Apothecaries' Company; and judging from the examination of medicines, which he states himself to have performed, he is probably also one of the inspectors of processes and preparations, of whom he makes mention, and to whom I shall have occasion particularly to advert. On every account, therefore, Mr Field seems peculiarly and equally qualified to explain the conduct of the College, and to defend that of the Company.

Notwithstanding these advantages, however, it appears to me that his success, in accomplishing the object of his letter, is far from complete. I must indeed confess, that the seeming candour displayed in it is well contrived to impose upon the half-informed, and to inspire those with confidence who have experienced no cause for distrust. But in defending what I have advanced, I shall be under the necessity of showing, that most of his explanations are derived from ignorance of facts, or suppression of evidence; and that they are equally unfortunate, when he resorts to the easy but fallacious expedient of proving particular circumstances by general assumptions.

Before I proceed to the consideration of those parts of Mr Field's communication with which I am more particularly concerned, I think it due to the Apothecaries' Company, to express my conviction of the truth of his assertion, that they made no reservation of the processes they employ; concealed no "precious nostrums." On the contrary, I should have considered the work which they have contributed to complete, as affording more than probable evidence (if it had not been directly contradicted), that the Company communicated all they knew, and suggested much more which they imagined; and that this mixture of fact and fancy had been sanctioned by the College, and adopted as their Pharmacopœia.

Mr Field, however, seems anxious to shake off the responsibility, which has been by some attached to the Company, for the share they were supposed to have had in the completion of this work; for, even after admitting, and claiming as just and merited, the praise bestowed by the College upon the Company for their "liberal communications," he informs us, that it was only in "a portion, comparatively small, of the formulæ contained in the Pharmacopœia, that this committee [of the Apothecaries' Company] were consulted." As, however, it is improbable that the committees would hold "frequent conferences" upon formulæ which remain unaltered, it is fair to presume, that their attention was particularly directed to the new preparations; and yet, if any difference exists, it is among these that the Company's deficiencies are most conspicuous.

The avowed object of Mr Field's letter being principally to prove, that the charge brought against the Company, of furnishing "spurious and inferior articles," is unfounded, it is singular that he should distinctly acknowledge, that, in one instance, a composition was "imperfect," and in another "incorrectly prepared;" or, having made this confession, it is still more remarkable that he should denounce your reviewer's opinion as false.

But Mr Field, not content with allowing the simple fact of the incorrectness of these preparations, informs us, that it arose from the Company not comprehending the performance, which their "liberal communications" had so considerable a share in bringing into existence. Whilst, however, some cases of imperfection are admitted by Mr Field, others are denied. But if I should fail to substantiate all that I have already adduced, it must be because the Company supplied me with preparations for which I did not send; or I have acted most unfairly towards them, by pretending to have examined medicines which I never procured. Where the error lay, shall presently appear.

Preparatory to noticing the cases adverted to by Mr Field, it may not be improper to mention the following circumstance, as the cause which originally induced me to examine some of the medicines prepared at Apothecaries' Hall.

In p. 155 of Dr Powell's translation of the Pharmacopœia, it is stated, that the Liquor plumbi acetatis is a dense liquor, of a deep brown colour. As I had uniformly observed its colour to be yellowish, it was evident to me that Dr Powell had not seen the solution he undertook to describe, and had been misinformed as to its nature.

Now, although Dr Powell has made very liberal acknowledgements to the Society of Apothecaries, for the information they had contributed, yet I thought it proper to inquire whether, in this instance, they might not have misled him. I accordingly sent to Apothecaries' Hall, eighteen months after the Pharmacopœia had been published, for the Liquor plumbi acetatis; and I received, so labelled, a solution of a deep brown colour, perfectly coinciding with Dr Powell's description. Now allow me, Sir, to inquire, what it would have availed any individual to have contended that a solution ought to be yellow, in contradiction to such ample evidence that it ought to be deep brown? It may be fairly presumed, that the assertion of Dr Powell, and the preparation of the Apothecaries' Company, would, with many persons, have been sufficient to have convicted the vender of the true Liquor plumbi acetatis, of furnishing inferior and spurious articles. I trust it will be admitted that the proceedings of corporate bodies, enjoying exclusive privileges, and aiming at exclusive reputation, are proper objects for rigid examination; their errors being productive of mischief, not only among the ignorant, who admit authority without examination, but also among the designing, who plead its example in excuse for imposture.

For these reasons, I ventured freely to state the nature of several medicines procured from the Society of Apothecaries, "a society," observes Mr Field, "who have hitherto maintained a character, both as professional men, and as a commercial company, not only irreproachable, but, I had almost said, above suspicion." I shall follow Mr Field's example, in omitting to notice the less important, but far from insignificant cases, of variation in specific gravity, which I have detected, and first consider the difference existing between the Liquor ammoniæ, as prepared by me, and at Apothecaries' Hall.

"In order to receive an explanation of this circumstance," observes Mr Field, "it must be recollected, that, though it is admitted to be the bounden duty of the Society of Apothecaries, to provide every medicine directed in the New London Pharmacopœia, they are by no means to be considered as precluded from keeping in their shop, every former preparation, which the public, whether professional men or others, may think it right to employ." After this declaration, it would scarcely be imagined, that when the new Pharmacopœia had been published fifteen months, some of the preparations directed in it were not to be procured at Apothecaries' Hall; yet I have the authority of a physician of eminence in this metropolis (whose name I am at liberty to disclose, if called upon), for stating, that when he applied, in October 1810, for the Acidum aceticum, the first article in that Pharmacopœia, he was informed, that it was not kept at the Hall. To this information I may add, that I have in my possession a bill for medicines procured in February 1810, to which is affixed the following "N. B. Sodæ carbon. not kept at the Hall." This statement exhibits a material difference between the acknowledgment, and the performance of "bounden duty."

With respect to the solutions of ammonia, "it will easily be conceived," says Mr Field, "that the difference in the strength of the Aqua ammoniæ puræ of the former Pharmacopœia, and the Liquor ammoniæ of the present, might induce many persons to prefer the former, which is considerably weaker than the latter, as more convenient for the division of doses. This has been actually the case; and though both of them are prepared for sale at the Hall, very little of the latter is called for, in comparison with the demand for the Aqua ammoniæ puræ, which was undoubtedly the article purchased by Mr Phillips; and the difference in the specific gravity of these two preparations, sufficiently accounts for the variation observed by him."

Under the head of liquor ammoniæ, in the "Experimental Examination," I have stated, that the specific gravity of the Aqua ammoniæ puræ of the late Pharmacopœia is 954, and that of the Liquor ammoniæ of the present 904; whereas the former preparation procured at Apothecaries' Hall, is of sp. gr. 990, and that of the latter, also prepared there, is of sp. gr. 988: It is therefore evident, that the Liquor ammoniæ is much stronger than the Aqua ammoniæ puræ, as both were prepared by me; and that they differ very little in power, as prepared at Apothecaries' Hall.

But Mr Field having discovered from my statement, what he could not have acquired from inspecting the preparations of Apothecaries' Hall, admits, that the former solution of ammonia is considerably weaker than the present; and then he prevents the occurrence of that contradiction, which would arise from giving the whole of my statement, by the suppression of part of it: for although I distinctly mention having examined both the Aqua ammoniæ puræ, and the Liquor ammoniæ of Apothecaries' Hall, he positively asserts, that I had undoubtedly examined the former only; meaning, of course, his readers to suppose, that, either through ignorance or design, I had been guilty of misrepresentation.

Upon this mode of explanation or defence, or by what other appellation its learned author may think expedient to designate it, I shall bestow no epithet, nor affix any character. It will be sufficient to state, that I sent to the Hall for the solutions in question, by their respective names, at different times; and the phials containing them were so labelled, as to induce me to suppose, that I had received what the Company, at least, considered to be Aqua ammoniæ puræ, and Liquor ammoniæ. I shall quit this part of the subject with adding, that since the publication of Mr Field's letter, I have again procured the new and former solutions of Ammonia from the Hall, and found neither of them nearly so strong as I have described them to be, when prepared from the ingredients directed in the Pharmacopœias.

The preparation next to be considered is the Liquor ferri alkalini. "It is not to be denied," says Mr Field, "that when this preparation was first made at Apothecaries' Hall, the proper mode of proceeding in it was not perfectly understood, and the composition, in consequence of this, was incorrect. It happened unfortunately," he continues, "that a portion of this imperfect composition was procured by Mr Phillips, for the purpose of experiment, and the results were very probably such as he has stated in his publication. The error was, however, soon discovered, and immediately rectified."

These observations are certainly well calculated to induce the belief, that I had once—once only—once, by some unfortunate accident,—procured this imperfect composition, immediately after it had been prepared, and before it had been subjected to the ordeal of that repeated inspection to which I have already alluded. But, Sir, unless the words "at first," "soon," and "immediately," can, by any perversion of language, be considered as descriptive of a period of eighteen months, they mean, on the present occasion, precisely nothing: for the Pharmacopœia was published in July 1809, and in January 1811 I procured what Mr Field denominates the imperfect composition; and I had previously obtained, at least six times, from Apothecaries Hall, a solution of iron in nitric acid, which was, in every instance, described to be a solution of iron in subcarbonate of potash. The last substance of which Mr Field takes notice, is the Potassæ supersulphas; and in mitigation of censure, he indiscreetly observes that this salt "is seldom, if ever, used medicinally." It is undoubtedly a medicine of more than questionable utility; but this is no excuse for disgracing it beyond its demerits; and it is surely unfair to render that worse by design, or by neglect, which is naturally bad. "The quantity," Mr Field continues, "procured by Mr Phillips from Apothecaries' Hall, seems to have been incorrectly prepared. This incorrectness probably arose from the difficulty which he himself has stated to attend the process, when conducted exactly in the manner directed by the Pharmacopœia, and is applicable only to the salt procured at an early period after the first publication of that book."

Now this passage contains a complete exemplification of all that is objectionable in Mr Field's method of defending the Apothecaries' Company. In the first place, the difficulty which I have described, in preparing the supersulphate of potash, is entirely occasioned by not sufficiently evaporating the solution before it is set aside to crystallize: under these circumstances, owing to excess of water, common sulphate of potash only, instead of the supersulphate, is formed. In the next place, Mr Field omits to mention, that I found the salt procured at Apothecaries' Hall, for supersulphate of potash, did not contain a particle of the salt for which it was sold; but consisted entirely of a mixture of about equal parts of common sulphate and nitrate of potash. But having omitted this circumstance, Mr Field considers it safe to attribute all imperfections to insufficient evaporation of the solution; an opinion which infers, that whilst one half of the supersulphate of potash was converted into common sulphate, by the agency of water, the other half was converted by the same means into nitre; a conclusion which no ordinary chemist would have formed, and which Mr Field will probably hesitate distinctly to avow.

Mr Field then asserts, without the slightest hesitation, that my observations apply only to the supersulphate prepared by the Company, at an early period after the publication of the Pharmacopœia. I have certainly no reason to doubt that the description might have proved correct, if the salt then made had been examined; but it so happens, that, since the appearance of Mr Field's letter, I have been able to ascertain, that the true supersulphate of potash was sold at the Hall in February 1810,—whereas the mixed salt, which I have described, was procured there in January 1811.

Having now, Sir, endeavoured, and, I trust, succeeded, to prove the accuracy of my former statements, it remains only for me to make a few more observations on Mr Field's letter, in order to form an opinion of the cause which produced the numerous and important errors I have pointed out. It will be readily granted;

and every day's experience confirms the fact, that either negligence, fraud, or ignorance, may occasion the preparation of inferior medicines. It is, however, impossible to attribute the imperfections which I have described, to the first of these causes; because Mr Field distinctly states, that "every possible care is taken, by the daily inspection of the managers during the processes, that they shall be properly conducted; which inspection is repeated previously to the medicine being exposed to sale, to ascertain that its quality is, in every respect, free from defect." I must candidly confess, that I am not disposed to impute fraudulent intention to the Company; for, when one cause is discovered sufficient to produce an effect, it is unphilosophical to suppose the existence of more; and it is ungenerous, and may be unjust, to assign the worst.

On these accounts, and for the following reasons, I attribute the whole of the evils I have described to ignorance—to ignorance, it must be confessed, of the most inveterate description, and of unyielding perseverance.

During a period of eighteen months, a solution of iron in nitric acid was repeatedly sold at the Hall as a solution of iron in subcarbonate of potash; and we are assured, by the unquestionable authority of Mr Field, that the processes for making these solutions were daily inspected by the managers, and that the inspection was repeated previously to the medicine being exposed to sale, to ascertain that "its quality was, in every respect, free from defect."

Thus, then, the managers, who inspected the processes, determined that excess of nitric acid did not prevent a solution from possessing alkaline properties; and the managers, who repeated the inspection of the medicines, determined that an acid solution, which ought to have been an alkaline one, was "in every respect free from defect."

Some time previous to February 1810, the Company's inspectors had an opportunity of examining the nature and properties of true supersulphate of potash, for at that period it was obtained at the Hall; but, before the end of January 1811, the inspectors determined, that a mixture of sulphate of potash and nitre constituted supersulphate of potash, "in every respect free from defect."

I think it now only remains for Mr Field to doubt the accuracy of the description which I have given of the medicines procured at Apothecaries' Hall. On this head it may perhaps be sufficient to state, that I have retained specimens of the articles described; and I shall conclude with advising Mr Field, when he has again occasion to appear before the public, not to state things as undoubted, which are readily proved untrue;—or to assert imperfections to have been "soon discovered, and immediately rectified," which can be proved to have existed during eighteen months;—and, lastly, not to attribute to water the magic but mischievous power, of converting supersulphate of potash into nitre!

29, *Poultry*, 17*th Nov.* 1812.

XII.

Observations on the Case of Ann Moore, called the Fasting-Woman of Tutbury. By A. HENDERSON, M. D. Physician to the Westminster General Dispensary.

SOME account of Ann Moore, known by the appellation of the *Fasting-Woman* of Tutbury, having already appeared in your Journal, accompanied by certain speculations on her case, I am induced to transmit to you the particulars of a visit which I had the curiosity to pay her, with my friend Mr Lawrence, and another gentleman, when passing through Staffordshire last summer; and to add a few remarks on her proceedings, with a view to undeceive the public in regard to her, and to expose the true character of her pretensions.

Previously to our visit, we had endeavoured to collect the opinions of the neighbourhood concerning this case of alleged extraordinary abstinence. Of the medical gentlemen to whom we addressed ourselves, the majority seemed sceptical on the subject; though it did not appear that any very decisive means had been used by them to prove the fact of imposture: But, among the common people, there was the most implicit belief in the truth of the story; and, whenever we ventured to express any doubts, we were invariably referred to the watching to which Ann Moore had been subjected, as a full and satisfactory refutation of our incredulity.

On our arrival at Tutbury, we lost no time in proceeding to the dwelling of Ann Moore, whom we found sitting up in a bed so constructed as scarcely to admit of her using the recumbent posture. She did not seem in the least discomposed by our abrupt entrance; though, on reaching the house, some bustle was heard in the upper story, as if preparations had been making for our reception.

From the appearance of her countenance, which was natural, and even healthy, and from that of her upper limbs, abdomen, and back, which we examined very carefully, she might be called rather thin; but many persons of her age, in perfect health, are much thinner. The abdomen was *not* contracted, nor did it present any peculiar appearance; nor was the pulsation of the aorta more distinctly perceptible than it is in the generality of persons. The lower extremities, however, seemed, to a certain extent, wasted and paralytic; the pulse was 94, firm and regular; both the hands and feet were moist; her mouth, as far as we were permitted to examine it, showed no deficiency of saliva; and, on holding a mirror before her face, it was immediately covered with copious moisture. She spoke to us in a distinct and tolerably strong voice, and moved her arms and fingers with considerable force. There was an offensive urinous smell about the bed.

In answer to the questions we put to her, she told us that, on the 31st of October, she would be just 51 years old; that she had tasted no solid food for upwards of five years, and no drink for nearly four years, and had no desire for either; that she never even wetted her lips, except when she washed her face, which happened about once a week; that she had voided no urine since the week before Easter three years, and no feces since that day (August 3d) five years; that she had not slept or lain down in bed for more than three years; that she sometimes dozed, with her head reclining on the pillow, but never so as to forget herself; that she had frequently blisters applied to the back of her neck, on account of a giddiness in her head, and that they rose and discharged plentifully; but that, in general, she did not experience much uneasiness, nor feel pain, except on pressure of the left hypochondrium; that when she took snuff, which she did habitually, it produced a flow of mucus from the nostrils; that her hands were generally moist; and that she perspired freely over the whole surface of the body, when she had fits. The nature of these fits she did not explain. Her mouth, according to her own declaration, she was unable to open, because it occasioned severe pain behind the jaws; but the lower jaw acted freely enough within the sphere in which she chose to move it in our presence, to show that there was nothing defective in the articulations; the masseter and temporal muscles were soft, and could not, therefore, resist its descent: besides, it was evident, when she spoke, that she could separate her teeth to some extent, and that without giving any indications of uneasiness. Of all the fingers of the left hand, except the index, she said that she had lost the use; the middle finger, indeed, she admitted, could be moved by external force, not by volition. But while Mr Lawrence was examining the spot, where she complained of pain on opening her mouth, she was observed to use the finger in question without any difficulty. On attempting to raise the two remaining fingers, which were in a bent posture, she made some resistance, and complained of my hurting her. The left-hand, she affirmed, was hotter than the other.

Among the circumstances that tend to invalidate many of the above assertions, and, in particular, the statement respecting her prolonged abstinence, the following may be mentioned.

1. *The natural and healthy appearance of her face.*

2. *The strength of her pulse, muscles, and voice.*

3. *The moisture of her mouth, nostrils, eyes, and whole surface of the skin.*—If the functions of the stomach were entirely suspended, or even materially deranged, it is not likely that the saliva would continue to be regularly supplied, since the flow of it depends so much on the healthy state of that organ; and, without taking into account the occasional discharges from blisters and other causes, it is obvious, that the exhalation from the lungs and surface of the body, which we ascertained beyond the possibility of doubt, must occasion a correspondent drain from the internal parts. But these excretions have been found to amount, in a healthy person, to more than 65 ounces in the day. Allowing them to be reduced, by disease, to one half that quantity, it is evident that they would still be sufficient to consume the whole substance of Ann Moore in a very few weeks.

4. *The entireness of her intellectual faculties.*—Long-continued fasting has always been reckoned among the predisposing causes of insanity. In a case recorded by Tulpius, delirium supervened on the 12th day. The same occurrence took place in that related by Dr Currie, though a considerable portion of nourishment had been conveyed into the system by means of injections. And, in the "Remarkable Case" described by Dr Willan, in the second volume of the Medical Communications, much confusion of mind was observable in the latter periods of the disorder.

5. *Her "notorious immoral character," in the former part of her life, and her own confession, "that she once,* THROUGH IMPOSITION, *passed for a religious person, merely for the sake of worldly gain.*[*]"

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[*] Account of the Extraordinary Abstinence of Ann Moore. By J— L—. 8vo. Uttoxeter, 1809, page 8.

—These are strong objections to the reception of her testimony, whatever degree of "calmness and serenity" may mark "her present state of mind;" however "clear and unimpeachable her doctrinal knowledge" may now prove, and however "pleasing it must be to every lover of religion to converse with her." If she once played the hypocrite "for the sake of worldly interest," the presumption is, that she would not scruple to act that, or any other part again, from the same motive.

6. *The obvious interest which she and her attendants have in supporting the deception.*—From the published accounts of her case it appears, that before she began to attract the attention of the public, she had been "labouring under the greatest distresses," and had not even sufficient clothes to cover her bed:* But, when we saw her, she seemed to be in very comfortable circumstances; and we were informed by a gentleman of the place, that she has turned the exhibition of her person to such account, as to be able, in the course of the present year, to place the sum of 400*l.* in the stocks.

7. *The imperfect manner in which she has been watched.*—As much stress has been laid on the proof afforded by the watching of her person during sixteen days, it may be worth while to inquire in what manner it was performed. The author of the "Account" tells us, that Ann Moore "having consented to be removed, Mr Taylor (a surgeon of the neighbourhood) went round the town to procure a number of the most respectable inhabitants for the watch; and he made it his first principle, to expunge those who, in his *opinion*, were in the least degree liable to be imposed on, or of a disposition that might be suspected would connive at imposture. He admitted no persons but such as most vehemently objected to the verity of the fact." "Mr H. Jackson," we are further assured, "having a *thorough knowledge* of the inhabitants, took upon himself the trouble of setting the watch; and he being of the most invincible incredulity, was well qualified for the purpose. When it was known that Nanny had been under watch for forty hours, and was challenging the investigation, *great numbers of people*, merely from curiosity, *came to offer their service*, so that there was not the least difficulty in procuring a sufficient number for the purpose. The principal care that remained to Mr Jackson, was the matching of people of different qualifications together, in such a manner as to afford a greater security, and that the watch should be constantly and faithfully kept. In order to which, such as man and wife, brother and sister, &c. were

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* Account, &c. p. 16.

never suffered to attend at the same time, nor any persons that were likely to be influenced in her favour. The watch was generally changed every four hours, and, for farther satisfaction, placards were stuck up in different parts of the town, announcing, "This is to maintain, that Ann Moore has taken no nourishment since Tuesday afternoon, at three o'clock, and is truly and constantly watched. All persons are hereby challenged to disprove the fact, and may watch for themselves, during the further period of time that shall, by medical consultation, be determined to establish the same." * The truth is, that almost every one, who "came to offer" his service, was permitted to undertake the task; and during the sixteen days that the watch continued, not fewer, as we were credibly informed, than from 80 to 90 different persons officiated. Among this number, is it not highly probable, that there may have been some of Ann Moore's private friends, who supplied her with food, and connived at her eating and drinking? We are not told what were the respective characters of the individuals employed—whether they were persons of known probity and veracity; no security is given for their vigilance; no information is afforded as to the mode in which they were superintended; but we are called upon to place unlimited confidence in Mr Taylor's "opinion" of their liability to be imposed upon; in Mr Jackson's "knowledge" of their characters, and his skill in "matching them together;" in other words, we are called upon to believe an improbable fact upon the most suspicious of all testimony, upon the *opinion* which A has of the dispositions of of B, C, D, E, &c. and of the *knowledge* and *care* which X has displayed in *matching* B with D, C with E, and so on. Can any thing be more unsatisfactory? But granting, for a moment, that the proof was as perfect as it was possible for it to be, and that this trial of Ann Moore was conducted with the utmost strictness and regularity,—what would the inference amount to? Why, that she had fasted sixteen days and nights, a period of time during which it is certainly not impossible that she may have endured the privation; not that she has lived five whole years and odd months without any nutriment whatever.

That the human body can be brought to subsist, for a considerable time, on very small quantities of food, has been long known; and, if we consult the records of medicine, we shall find, that there are not wanting well-authenticated instances of even more protracted abstinence than was exhibited on the occasion in question. Thus Doebel gives the history of a hypochondriac, who fasted during a period of 40 days, but died soon after his return to food. And Morgagni, on the authority of Fantonus, mentions the instance of a woman, who obstinately refused to take any sustenance, except twice, during 50 days, at the end of which period she died. In the case which is detailed by Dr Eccles, in the 5th volume of the Edinburgh Medical Essays, the patient continued first 34 days, and afterwards 54 days, without either eating or drinking. It is true, that, during part of this time, nourishing injections were used; but, for the last 20 days of the second fast, even that mode of supply was cut off, and the abstinence was complete in every sense of the word In Dr Willan's case, the patient persevered in the disuse of solid food till the 61st day, taking only small quantities of water slightly flavoured with juice of oranges, to moisten his mouth. These two last cases also terminated fatally.

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* Loc. cit. p. 21, 22.

The madman, mentioned by Ponteau,* lived 47 days, without taking any thing but a pint and a half of water in the day, and stood constantly in the same position during 38 days of that time: the return to food was followed by a temporary cure of his insanity. That Anne Moore did not altogether refrain from drinking during the watch of 16 days, is admitted even by Mr Taylor. "In the course of the first three days of the investigation," says that gentleman, "she swallowed, in the whole, about ℥iss of water; but happening to step into the room while she was swallowing it, the extreme misery of deglutition, and the violent rising of wind resisting its passage to a degree that almost seemed to threaten suffocation, induced me to dissuade her from taking any more, while the experiment that was to vindicate her veracity continued." ‡ The only fact, therefore, that can be learned from this imperfect trial, is, that Anne Moore was not seen taking any *solid* food during the space of 16 days and nights. Before that time, it is acknowledged, that "she had *abundant* opportunities" of eating; and since the watching, which has since so unaccountably allayed all suspicions with regard to her proceedings, she can be at no loss to procure sufficient aliment, from the quantity that is introduced into the house for her daughter, and the other female who lives with her.

8. *Her dread of a repetition of the watching.* On Mr Thompson's proposing to her a second watching, she said, "that she had been upon her *trial* once, which she would not then have submitted to, but to oblige the *minister*; and for nobody in the world

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* Memoires de l'Academie des Sciences, 1769.

‡ Med. & Phys. Journ. Vol. XX.

would she undergo a repetition of it. Her attendant," Mr T. adds, "who is as well-educated a hypocrite as her mistress, was pleased to style it, '*a trial for her life.*'"*

9. *Her dread of all experiments whatever.* Thus, on one occasion, she refused to allow Dr D. to hold a mirror before her face, in order to examine her respiration; exclaiming, "No more experiments for me! I have suffered enough already from experiments." At another time, she contrived to break a thermometer, which a gentleman had put into her hand, in order to ascertain the heat of her body. It is probably from a similar motive, that she now keeps her mouth shut; apprehending, either that her visitors might put her powers of deglutition to the test, or, that the mere inspection of her tongue might prove the recent introduction of food.

10. *Her concealment of the evacuation of urine.* At the time of the watching, it is admitted, that she passed urine to the amount of a pint in every two days: she has since found it convenient gradually to diminish the quantity, till at last she voids none at all. But there were several pretty strong presumptive proofs of the falsity of this assertion. One of us, in approaching her bed, happened to overturn an utensil, which was placed under it, obviously for her use, and which was partly filled with urine. There was also, as I have before remarked, an offensive urinous smell about the bed, to lessen the perceptibility of which is probably the reason of her insisting upon the window being kept always open.

These circumstances I mention the more particularly, as they led to the detection of a similar imposture, which was practised by a girl in Germany, about twelve years ago, and of which a minute relation has been furnished by Grüner.† Like Ann

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* Med. and Phys. Journal, Vol. XXIV. p. 312.

† Erzahlung der Betrügerei eines Wundermadchens, 12mo. Berlin, 1800. That such impostures were by no means uncommon in former ages, will be abundantly evident from the following list of publications, which I extract from Sprengel and Haller.

Poggii Florent. de puella Germanica quæ biennium fere vixerat absque cibo potuque. 4to. Florent. 1551.

Ger. Bucoldiani brevis enarratio de puella, quæ sine cibo et potu per aliquot annos in pago Roed. egit. 8vo. Paris, 1542.

Catherinæ Binder inedia. 8vo. Heidelb. 1584.

Pasc. Rollin, histoire memorable d'une fille d'Anjou, laquelle a etée quatre ans sans user d'aucune nourriture, que d'un peu d'eau commun. 12mo. Paris, 1587.

Franc. Citesii Abstinens Confolentana. 8vo. Genev. 1602.

Pauli Leutuli historia admiranda Apolloniæ Schreieræ. 4to. Bernæ, 1604.

J. Chifflet, asitia in puella Helvetica mirabilis. 8vo. Vesunt. 1610.

Philip. Sechtleni lapis lydius inediarum prodigiosarum, quas plurimi in multos dies, septimanas, menses, et annos protraxerunt. 12mo. Paderborn, 1614.

Moore, this girl submitted to a watching of two or three weeks; and like her, too, she passed the ordeal with her integrity unimpeached. If I remember right, she was even subjected to it a second time, without any discovery taking place. But, some time afterwards, a bystander observing that her linen was generally in a damp state, and had an urinous smell, (to conceal which, she used to have heated stones introduced into her bed, under pretence of cold at the pit of her stomach, and would never allow the window to be shut, affecting to faint the moment it was closed), was led to a train of investigation, which ended in the complete exposure of the various artifices to which she had resorted for the concealment of her evacuations.

11. *Her saying, "that she believes a time may come, when God will permit her to eat."* She is thus prepared for any discovery that may take place, and can never be surprised at her meals or potations, without a ready excuse.

12. *The acknowledged fact, that she is now in the same, or nearly the same condition of body as when she commenced her alleged fast.* "It is apparent, says your correspondent Mr Granger,* that abstinence *qua* abstinence has no effect upon her system. The existence of the patient, after having fasted two years, with a countenance not far removed from the appearance of health, will not be looked upon as an effect of abstinence. For many months together, no wasting is observed." Nay, what is more extraordinary, if the descriptions which have been given of her person, by Mr Granger and others, be correct, it will follow, that latterly she must have increased considerably in bulk; for we did not find the abdomen "so remarkably sunk in" as Mr G. saw it: We did not succeed, like Mr Taylor, in tracing, with the finger, the grand trunk of the aorta, "from the place most immediately under the ensiform process of the sternum, where the loose integument is drawn upon it, nearly to its bifurcation," in drawing it "from its situation over the spine," and "holding the skin

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Magni Gabr. Block, Betänckiande, öfwr Este jonsdotters longwarige fastande i Skone. 8vo. Stockholm, 1719.

Joh. Doebel vollstandiger Bericht von Ester Johannsen und ihrem langweiligen Zehnjahrigen fasten. Hall, 1724.

C. J. Lossau Beschriebung eines Casus inediæ. 4to. Hamburg, 1729.

Charles Fontenelle sur une fille de Grenoble, que ne boit ni ne mange depuis quatre ans. 4to. Poitiers, 1737.

One of the above mentioned writers (Block) makes an observation, which is not unworthy of attention, viz. that all the examples of extraordinary fasting have been confined to the female sex. The remark still holds true with respect to the marvellous cases.

* Edinburgh Medical Journal, Vol. V. page 321.

across it," so as to show "both its shape and pulsation;" * nor did Ann Moore appear to us, as she did to J. L., "the most emaciated creature that ever existed." † Now, it has been shown, that a considerable evaporation is constantly taking place from her lungs and skin: nothing, therefore, short of an actual miracle, can solve the problem of her increased size of body, under such circumstances.

13. *The variations and contradictions in her statements.* It would appear, from Mr Taylor's narrative, that she continued the use of solid food in small quantities till the end of June 1807; but to us she positively averred, that she had taken nothing since the week before Easter of that year. When Mr Thompson saw her, she acknowledged, that she passed a small quantity of urine once a week, and he understood this to be the case at the time when he wrote, (August 1809); but to us she declared, that she had voided none since the end of August 1808. In reply to a question by Mr Corn, ‡ she asserted, that she *never perspired*; but to us she admitted, that she perspired freely, when she had fits. To the gentleman whose thermometer she demolished, she complained of pain, and cried out upon the slightest touch of the abdomen; while she allowed us to use considerable pressure, without expressing the least uneasiness. On the contrary, she repeatedly assured us, that we gave her no pain by the force which we employed.

14. *The inconsistency of her actions with her statements.* If the attempt to eat and drink really caused her such "misery of deglutition," as Mr Taylor expresses it, why did she do either—especially as she had lost all desire of food so early as November 1806? Her deceit respecting the contraction of the middle finger of her left hand, and inability to use it, has been already noticed. To Mr Thompson she pretended to be in a state of such weakness, as made it great labour, and even pain for her to attempt to move; but upon his threatening her with a repetition of the watching, "she so completely forgot her situation," says Mr T. "that she raised herself upright in bed, a position, in which, we had *previously* learned, she had not been for more than a year; griped her fists; threw her arms and head about with as much strength and ease, as the most healthy woman of an equal age could possibly do, and talked at the same time most loudly and incessantly, from the effect of violent passion." These inconsistencies are alone sufficient to throw discredit on every thing she says.

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* Medical and Physical Journal, Vol. XX.

† Loc. cit. page 25.

‡ Monthly Magazine, Oct. 1811.

Other facts and arguments might be adduced; but I trust, that I have collected a sufficient body of evidence to prove, that there are no solid grounds for supposing, that the order of nature is subverted in the person of Ann Moore, but, on the contrary, that there is every reason to believe that her abstinence is feigned, and her sufferings, in a great measure, simulated. Such an inference Mr Granger is pleased to denominate *an hypothesis;* but the hypothesis appears to me to be on the part of those who imagine that a human being can exist, in a state of comparative health and strength, during a term of months and years, without any of the ordinary means of nutrition; and the only wonder remaining in my mind, is, that medical men should be found to lend their sanction to such extraordinary attestations as we have seen concerning the case in question.

Golden Square,
November 25th, 1812.

PART II.

CRITICAL ANALYSIS.

I.

A Treatise on some Practical Points relating to the Diseases of the Eye. By the late JOHN CUNNINGHAM SAUNDERS, Demonstrator of Anatomy at St Thomas's Hospital, Founder and Surgeon of the London Infirmary for Curing Diseases of the Eye. *To which is added, a short Account of the Author's Life, and his Method of Curing the Congenital Cataract,* by his Friend and Colleague, J. F. FARRE, M.D. The whole illustrated by Coloured Engravings. 8vo. pp. 216. London, 1811.

By the publication of this volume, Dr Farre has rendered an acceptable service to the fame of his deceased friend, and to the profession at large. It contains a concise and affecting account of Mr Saunders's life, illness, and death; a considerable body of information upon some diseases of the eyes, derived from original and extensive sources of observation, to which few writers have ever before had such access; a frequent reference to the general principles of physiology which bear upon the morbid changes in the structure of different parts; and some practical directions relating to the performance of a capital operation, which highly merit consideration.

The treatment of diseases of the eyes, like every other department of the healing art, may be naturally expected to improve, in proportion to the variety of experience from which its theory and practice come to be deduced. Heister and Pott having before them only the limited number of patients which occur in general practice, contributed very much to a right understanding of the nature of cataract; and fortuitous circumstances have recently afforded opportunities, which a young artist, gifted by nature with an excellent talent for observation, has, by his own diligence, turned to a very good account.

Mr Saunders was born at Lovistone, in the county of Devon, on the 10th of October 1773. After he had served an apprenticeship of five years to a surgeon at Barnstaple, he went to London to complete his medical education, without a single introduction to any one who could assist him in his studies. So rapid was his acquirement of anatomical knowledge, that he was soon distinguished by his teachers, and at the end of two years he was appointed demonstrator at St Thomas's Hospital. From this period he resided several years with Mr Astley Cooper, and continued to discharge the duties of his office of demonstrator, except during a short interval, until the time of his death. In 1803, he established himself as a surgeon in Ely Place. He married and settled; and began his career of usefulness and honourable ambition, by publishing a proposal for founding a charitable institution in London, for the cure of diseases of the eye and ear. In 1809, he announced his intention of publishing a treatise on some diseases of the eye; and he printed an Essay on Inflammation of the Iris, as a specimen of a series which he meant to communicate. During this period, he likewise published a work on the anatomy and diseases of the ear. His inquiries on the congenital cataract, a subject which had long occupied his unwearied attention, were now nearly concluded; and after the anatomical lectures had closed, he commenced the manuscript of his intended publication. He wrote the essay on inflammation of the conjunctiva in infants, and on the cure of the inversion of the upper eyelid by excision of the tarsus, which, together with the essay on inflammation of the iris, form the three chapters of the present work. But the attacks of the disease which proved fatal to him became so frequent, that he was not able to correct what he had written.

The symptoms of his complaint are thus accurately related:

"His disease commenced with the following symptoms: Acute pain of the scalp, investing portions of the occipital and right parietal bones, accompanied with a sensation of icy coldness (unreal) in the affected part, urgent vomiting, pulse sometimes frequent, at others undisturbed. These paroxysms gradually passed away in a night, almost always in the space of twenty-four hours, and returned at uncertain intervals. They were excited by a current of cold air chilling the skin, by indigestion, or by anxiety. He was habitually temperate; he disliked wine, and took even malt liquors with caution, for they aggravated the paroxysms of the disease. He was subsequently affected with an imperfect amaurosis of the right eye." p. 21.

"At the approach of the winter 1809, the paroxysms of headach and vomiting became more frequent. He had sensibly wasted, and was often distressed with dyspepsia and palpitation. In giving his last demonstration, in November 1809, he felt oppressed by the heat of the room, and the numerous class which surrounded him, and was obliged to retire, leaving his demonstration unfinished. His attention was first interrupted by a numbness of his right leg; his expressions were confused; and he continued to repeat the words he had last uttered. Although he was conscious of his error, he could not correct it.

" The voluntary muscles were affected, and he walked with an unsteady pace. From this period he frequently lisped, and had a difficulty in retaining his saliva." p. 23.

" As soon as the amaurosis of the right eye manifested itself, the evacuant plan (by cupping, &c.) was pursued, and stimulants were refrained from, to the extent which he could bear. At no subsequent period did his declining strength admit of further reduction. The torpor of his bowels, in the earlier stages of the disease, was relieved by doses of the submuriate of mercury, and the compound extract of colocynth or the sulphate of magnesia; in the latter, by rhubarb, to which was added, a portion of the subcarbonate of soda. In the country, he was ruddy and enjoyed health. In the impure air of a large city, and still more of a dissecting-room, to which during so many winters he had been exposed, his colour had insensibly faded, and his health had been less vigorous. He was repeatedly, but in vain, solicited to reside at a small distance from town." p. 26.

On the 10th of February 1810, whilst Dr Farre was visiting him, he was suddenly seized with an apoplectic fit, and expired. The following description of the morbid appearances in the head is given by Mr Astley Cooper, who examined the body three days after death.

" The dura mater adhered firmly to the inner side of the cranium, especially over the right eye; but it was apparently free from disease. The tunica arachnoides and pia mater were healthy. Although other parts of the body had become changed by putrefaction, the brain possessed an uncommon degree of firmness. On cutting open the lateral ventricles, a quantity of coagulated blood was found at the posterior part of each, and nearly an ounce of bloody serum was discharged. The clot of blood extended from the right ventricle in the direction of its inferior cornu; and that part of the brain which was in contact with it, had a soft and broken texture. The weight of the clot was at least one ounce. In the pons Varolii there was extravasated blood, disposed in streaks."

The biographer concludes his narrative with a short sketch of the character of Mr Saunders, and with an account of the respect paid to his memory by the governors of the charity to which he had so closely attached himself. Since the death of this excellent man, the measures pursued in the Institution, for the cure of diseases of the eye, have lost nothing of their vigour or their use; and indeed, some regulations have been adopted, which have corrected whatever was thought to be amiss, and supplied whatever was defective.

The contents of this treatise are arranged in six chapters, of which the three first were left by the author sufficiently complete for publication; the other chapters are composed from the notes and cases left by Mr Saunders, and from direct observation of almost all the patients, made by his friend and colleague Dr Farre. Both the author and his editor have chiefly attended to the practical parts of their subject; they have enlarged upon the best method of treating several important diseases of the eyes; and, with a very few exceptions, profess only to deliver such remarks as are adapted to the apprehension of common readers. Some beautiful plates are given, because they appeared to be necessary to communicate correct notions of diseases which are imperfectly comprehended; and they completely answer that purpose.

The first essay is on the inflammation of the conjunctiva in infants, or, as it is usually called, the *purulent ophthalmia of infants.* The author objects to this common name, because it refers only to one symptom, which does not constitute the essence of the disease; and he gives a minute and masterly description of the different stages of the disease, in which he calls the attention of practitioners to the urgency of the case; and insists, with great force of argument, on the necessity of inspecting the eye at proper intervals, so that the actual state of the membranes may be known. He considers this inflammation as nearly allied to erysipelas; and he points out, in a new and striking manner, that, when this disease destroys vision, the destruction is accomplished by a succession of sloughs of the cornea, and not, as generally supposed, by the formation of pus within the globe of the eye, which distends and bursts like an abscess. For the cure, he advises leeches to be applied as near the eyes as possible, and the bleeding from the bites suffered to continue a considerable time. This form of evacuation he prefers to drawing blood by scarifying the conjunctiva, which practice is certainly injurious in the active state of the inflammation, and manifestly improper. The infliction of mechanical injury on a part already actively inflamed cannot be advantageous; scarifications can only be useful when made after the inflammation is on the wane: and here again great caution is required; for they cannot with propriety be used, if there be any ulceration or sloughing of the cornea produced by the disease, because a division of the vessels would only be an interruption to the restorative process which may be about to commence.

The indiscriminate use of stimulating injections is condemned;

and very moderate astringent applications—such, for example, as half a grain of sulphate of zinc dissolved in an ounce of water, or from two to six grains of alum to the same quantity of distilled water—are judiciously recommended. The purulent discharge in itself is looked upon as being of trivial import, if there be no ulcer or sloughs on the cornea. The parts must be diligently examined and watched; and when the surface of an ulcer on the cornea becomes sloughy, cindery, ragged, and flocculent, Mr Saunders advises the tonic plan to be adopted, and recommends the extract of cinchona to be given in doses of a few grains in a little pap.

Essay II. relates the history of inflammation of the iris, and the influence of the extract of belladonna to prevent the consequent obliteration of the pupil. The description of this disease is equally admirable as that in the first essay; and the application of the extract of belladonna to the surface of the conjunctiva, by which the pupil is remarkably enlarged, is very ingenious. Inflammation of the iris is often seen uncombined with any superficial ophthalmia; and so small a quantity of effused lymph is sufficient to unite the iris to the capsule of the lens, that the most powerful antiphlogistic remedies must be employed to prevent further effusion, and the extract of belladonna to interrupt the adhesion of these parts, and consequent blindness. The conjunctiva, however, is generally inflamed in a greater or less degree, when the iris is thus affected. Sometimes this state of the iris arises from syphilis, when mercury must be vigorously exhibited. Five instructive cases, and some excellent drawings, are given to illustrate the facts mentioned in this valuable essay.

Essay III. is on the cure of the inversion of the upper eyelid by excision of the tarsus; and plate II. contains two figures representing the eye in its closed and open state, after Mr Saunders had removed the tarsus and roots of the cilia, with the most perfect success, and, by a bold effort of his art, removed a most disagreeable and painful disease.

In the 4th chapter, we have a description of some of the more important terminations of ophthalmia, partly from the author's notes, and partly from Dr Farre's own observations. On a point of diagnosis, respecting which it is highly requisite to have the most accurate information, Mr Saunders has left the following remarks:

"The diagnosis between syphilitic and simple inflammation of the iris, may be formed from the following appearances: In the syphilitic, the iris is much more thickened and puckered; the texture appears more changed; the irritation on exposure to light less; the pain is more intense at night; red vessels are seen in the substance of the iris,—a circumstance not often observed in the early stage of simple inflammation of the iris, in which patients, from the severity of the pain, are sooner induced to apply for relief; the pupil is not so much contracted as in the simple inflammation, and, although the general appearance of the disease be greater, the pain is actually less; the blindness is often total; to which perhaps may be added, that the lymph is deposited, as it were, in drops, and assumes a tubercular appearance.' p. 64.

It was Mr Saunders's intention to have written an essay on the acute inflammation of the conjunctiva in the adult, in which he would have investigated a change of structure, which is occasionally produced by this complaint, and which protracts the disease in its chronic form. We are informed by the learned editor, that the treatment intended to be recommended in the inveterate form of this disease, which is here denominated a glandular state of the conjunctiva, was excision by the scissars; and to prevent the subsequent morbid growth of the conjunctiva, a solution of alum, or of the nitrate of silver, to be frequently injected on it. Many rare and important observations on sloughing and ulceration of the cornea, and on protrusion of the iris, may be read in this part of the work. We would readily extract some of them; but our attention must be carried hastily through the contents of this and the next chapter, in order to consider the most original, curious, and interesting part of this treatise, which relates to congenital cataract. Cases of amaurosis, preceding the disorganization of the eye, and the protrusion of fungi, some of which are characterized as being malignant in their nature, and others not so, are related with perspicuity, and all the attainable information. But our knowledge of these diseases is still imperfect; and experience affords no very encouraging hopes of curing them. We remember to have heard an eminent surgeon say, that, in the course of fifty years' practice, he had frequently extirpated the eye, and assisted others in performing that operation; but not one of the patients survived longer than two years. The disease returned, either externally in the same form of tumor and fungus, or the patient died suddenly; and, upon examination after death, the brain was discovered to be affected, apparently from the disease extending along the optic nerve.

It now remains to state what we here find recorded about cataract.

The congenital cataract is an opacity either of the lens or its capsule, or of both. It is a disease which attacks, in many instances, the children of the same parents. The lens is either solid, soft, or fluid; but more frequently all that is capable of being absorbed by nature is removed, and the capsule alone remains. The majority of cases are capsular cataracts: hence, Dr Farre informs us, Mr Saunders deduced that important principle, on which he proceeded in all his operations, viz. to effect a permanent aperture in the centre of the opake capsule. He overcame the difficulties with which the surgeon has to contend in operating upon children, by fixing the eyeball with Pellier's elevator; controlling the patient by assistants; placing him upon a table in a recumbent posture; dilating the pupil by dropping the extract of belladonna, diluted with water to the consistence of cream, into the eye, or smearing the extract itself over the eyelid and brow an hour before the operation; and, lastly, by using a diminutive needle, armed with a cutting edge from its shoulders to its point, and thin enough to penetrate with the most perfect facility. In accomplishing his main object, the permanent destruction of the central portion of the capsule, he passed his needle through the cornea, very near to its junction with the sclerotica. He did not attempt what is commonly called *couching;* he performed no depressing motion; as it was a material point with him not to injure the vitreous humour or its capsule. He proceeded, with a gentle lateral motion, to destroy the centre of the capsule, and moderately to break down and open the substance of the opake lens, when that part was *in situ.* But when the cataract was capsular or membranous, its lens having been absorbed, he used his needle with much more freedom: yet, in other respects, he acted in the same manner:—and this is called the *anterior operation.* He was led to make choice of this mode of operating on children, by the following accident.

"February 5th, 1808.—J. Jaques punctured, with a very fine awl, the transparent cornea, pierced the margin of the iris, and the capsule of the crystalline lens. The wound had now produced a cataract, and was attended with a great degree of ophthalmia, and a slight adhesion of the wounded iris to the capsule, towards the inner canthus. The inflammation subsided by the usual means; and, on the 20th of March, the pupil being dilated with the belladonna, a crucial aperture was observed in the capsule, and the lens itself was becoming flocculent. On the 27th of June, he finally presented himself at the Infirmary. The lens was gone, and the pupil clear, except at the margin of the adherent point of the iris, where a little of the capsule was seen. He was fitted with proper convex glasses, and saw as well as any one could do after the best operation for the cataract." p. 162.

The author's preference of his anterior operation, is founded upon the comparatively slighter injury that results to the eye from a penetrating wound of the cornea. In performing what is called the *posterior operation,* he passed his needle into the eye at the distance of a line behind the junction of the cornea with the sclerotica, and proceeded according to the nature of the disease in the capsule or lens. The steps of this operation are described with sufficient minuteness; and the total result of all his operations on the congenital cataract is summed up in the following statement of facts—

> "In sixty patients, he succeeded in giving sight to fifty-two. In thirteen of them, he operated on single eyes. In two of these, one of whom was an idiot, a pupil of each was completely cleared: but the retina being insensible, the operation was not attempted on the other eyes. In a third, the result is not noted, except that he considered it a hopeless case, when this operation was tried. A fourth was altogether unmanageable, being not only afflicted with congenital blindness, but also deafness. In a fifth, the eye was lost by suppuration. In the remaining eight he was successful. Of these, five had each previously lost an eye; one by variola, and four by operations performed by other surgeons, three resulting from attempts to extract. In forty seven patients, he operated on both eyes. In one of these, who was an idiot, no vision was obtained, although a permanent aperture was made in each capsule. In a second, the operation was completely successful in one eye, but failed in the other by the supervention of acute inflammation, which closed the pupil with lymph. In a third, the operation proved unsuccessful in both eyes by the same result as the last, a closed pupil from adhesive inflammation. In a fourth, the consequent inflammation passed into suppuration, but the other eye was cured. Two were under care at the time of his death, one of whom was already cured in a single eye. Forty-one were cured in both eyes." p. 152.
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> "The greatest success attended the operation between the ages of eighteen months and four years; and, if any intermediate time be selected, the editor is inclined to recommend the age of two years." p. 153.
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> "It may not be improper to close these observations by declaring, that the excellence of the Author's operation does not rest merely on the evidence of the editor. Mr Travers, since he was appointed surgeon of the Infirmary, in March 1810, has cured, by this operation, forty-seven patients; and, although many of these were cases of congenital cataract, the majority were cases of ordinary cataract in the adult, in whom the lens was frequently of a firm texture." p. 174.

Those who undertake to perform any operation on the eye, will undoubtedly avail themselves of the important information contained in this treatise; and to those who are anxious for direction in the treatment of several diseases, we earnestly recommend a diligent perusal of its contents. We have heard the question discussed with little urbanity or candour, whether Mr Saunders be entitled to the credit of a discoverer in that line of practice, to which he devoted so many years of his short and valuable life? After the clear statement of what he had already done, and what he intended to do, with the facts and materials which he had collected together, it is not likely, we think, that his merit and originality will be disputed any longer. For, although Pott, Scarpa, and Hey, had observed, when the cataract was of the mixed kind, partly soft and partly hard, that the immediate effects of their couching-needle were different from the common cases requiring depression, and therefore contented themselves with a free laceration of the capsule, and left the parts of the crystalline lens to be absorbed in their natural situation, yet no one had shown, before Mr Saunders, those changes which produced that peculiar form of disease; no one had practised an operation on the capsule only; and no one before him recommended publicly the operation of couching, or extraction of the cataract in young children. The difficulty and danger of operating upon patients with cataracts, before they are so far advanced in years as to understand the design of the attempt to cure them, and have been taught to desire it, is the uniform language in all the books and papers which we ever met with in the course of our reading, except in an excellent essay on the use of the couching-needle in infants, communicated in the 7th volume of this Journal, page 394, by our estimable and much-lamented correspondent, Mr Gibson. It is impossible not to be struck with the remarkable coincidence in the history, and character, and premature death of these two distinguished young men. Both were richly endowed by nature with qualities requisite in the formation of surgeons of the first rank; both were happily placed in situations to improve those qualities; both engaged in the same pursuit; and both employed the last hours of their lives in writing down the observations and improvements they had made. Mr Gibson certainly preceded Mr Saunders in some points relating to the operation upon infants; but there was no intercourse between them. The labours of the one were unknown to the other. It has been insinuated that Gibson speaks grudgingly of Saunders; but the passage in his Essay does not warrant that interpretation. He lamented that the operation practised at the Infirmary in London was concealed. And who did not? But what was the motive for secrecy, and what means were adopted to insure it? Mr Saunders was engaged in investigating the subject of congenital cataract; he was finding out some new fact every month; his inquiries were unfinished; yet he instructed two pupils in the rudiments of his operation, though confessedly imperfect, and his health and business prevented him from doing more than assure the governors of the Institution, that he had been so fortunate as to discover a method of curing infants born blind. We lament that any expression like resentment should come from a quarter where no jealous feelings were ever felt; and we are persuaded, that, if the writers had lived to enjoy the fruits of their fame, they would have been loud in each other's praise.—" Ea est enim profecto jucunda laus quæ ab iis proficiscitur, qui ipsi in laude vixerunt."—Tullius.

The merit of Mr Saunders's operation appears to us to consist in that golden rule, not to do too much. His needle is smaller than the common needle, and consequently cannot do so much injury to the parts, a circumstance not sufficiently attended to in couching. The necessity of repeating the operation several times in some cases, seems likely to prevent its being universally adopted; for patients and their friends are unwilling to have recourse again to an operation, which is associated in their minds with dread, however trifling the pain may be, and however expeditiously and easily the operator performs all that he thinks necessary. Making the wound into the transparent cornea is not new, nor the application of the belladonna. Reimarus recommended the latter before extracting the crystalline lens, and Darwin * suggested its use in ophthalmia. We wish more frequent comparison had been made between the author's observations and those of eminent writers of the Italian and German schools. On the whole, we consider the author and editor entitled to great credit for accumulating a valuable collection of facts; for offering many original and just criticisms on several points of practice; and for having contributed the materials for establishing an improved mode of curing diseases of the eye. Under the impression of such sentiments, we take our leave of this treatise, and may be permitted to express our hopes, that it will not be the editor's last contribution to medical science.

II.

An Account of a Case of Recovery, after an Extraordinary Accident, by which the Shaft of a Chaise had been forced through the Thorax. By WILLIAM MAIDEN, Member of the Royal College of Surgeons in London. 4to. pp. 28. Rivingtons, 1812.

WE cannot bestow any praise on this *maiden* effort at authorship. An "extraordinary accident" might well have occupied half a column in the Morning Post, or even a page in the "Wonderful Magazine;" or, as "a case of *recovery,*" it might have surprised us in the columns of a Medical Journal: But trussed up alone, in a gay quarto, with all the decorations of splendid typography, superfine ink, and the hot press, it seems to be usurping an importance to which it is not entitled, and which it cannot obtain, except in the vicinity of Stratford-le-Bow. For this meridian, probably, the two engravings, representing a portion of the shaft of a gig, and the "ground plan of Mr Overton's stable-yard and out-buildings," are particularly calculated: but for the instruction of the surgeon, or for the elucidation of his art upon any one point of pathology or practice, we find absolutely nothing divulged.

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* Vide Zoonomia, Vol. III. p. 132, 8vo edition.

A multitude of "cases of recovery," after the thorax has been pierced by swords, bayonets, or bullets, are on record; but this case is perhaps unheard-of, among the "hair-breadth 'scapes" detailed in the annals of Surgery, in respect to the size and singularity of the piercing instrument—the shaft of a gig! And although, as our author anticipates, such an accident may never happen again, he thinks "the history of it may prove useful," in the following manner.

> "Surgeons may hence be encouraged, not in any case to despair. *Continued zealous endeavours,* even under hopeless circumstances, they will learn, may possibly prove successful; *may probably afford some remark* contributory to the improvement of chirurgical knowledge; and certainly *never can be hurtful* to science or mankind."!

But without farther preamble, and passing over the *affidavits* of the unfortunate gentleman, in this case impaled, and of two spectators, taken before five magistrates of Essex, we shall briefly rehearse the misfortune of this modern John Gilpin,—a misfortune which never could have happened in any land but Cockneydom.

Mr Thomas Tipple, intending to spend his Sunday with his friend, Mr Overton, on the border of Epping Forest, near Stratford, arrived there at nine o'clock in the evening, on Saturday the 13th of June, 1812. In the absence of the groom, Mr Tipple took upon himself the office of unharnessing his steed, and began, like a true Cheapside jockey, by taking off *the bridle!* The horse, having his head and eyes at liberty, became unruly; and the jockey seized him by the "foretop," with the view of rectifying the error he had committed, by putting the bridle on again. "Whilst thus occupied," (we quote Mr Tipple's attested account), "the horse made a violent plunge, and thrust me, by the end of the off shaft, against that part of the chaise-house which projects from the clump of out-buildings, on the right side the yard, directing his course towards the stable door in front. At this instant, I felt the end of the shaft perforate my side, under the left arm; whereupon I made a violent effort to draw myself back, while the horse kept plunging forward, and I soon felt the end of the shaft pass from under my right arm, occasioning acute pain. Alarmed at my perilous situation, I cried aloud for assistance, and the horse continuing to press forward, occasioned further violence, on the left side, producing, as it afterwards appeared, a second wound, inflicted by the front tug-hook under the shaft. At this time, Mr Lawrance and his two sons were passing, and hearing the outcry, ran into the yard; they quickly put the horse back, and rendered me every assistance in their power. At this awful period, the end of the shaft was presented to my view, which had been forced through the boarding of the chaise-house, and projected several inches beyond my right side. Previously to withdrawing the shaft, by which I was impaled, I placed my hand on the projecting part, to draw myself off, in which I was assisted by Mr Henry Lawrance: So soon as I was released, I respired with some force, two or three times, and found no alteration in my breathing, and no part of my body appeared under the slightest agitation. I then went into the house, pulled off my waistcoat, and looking at the wounds, wished to have seen them bleed more freely; after that I walked up stairs with a steady step," &c.

After he was undressed, a faintness came on, with extreme oppression of the respiration, which was speedily relieved by a copious bleeding, to the extent, Mr Maiden says, *of four pounds* avoirdupois weight. During the first week, the difficulty of respiration recurred daily, and was regularly relieved by venesection, which was repeated on six successive days, so that 120 *ounces* were taken away in addition to the first bleeding. Laxatives, aqueous diet, extreme quietness, and subsequently two blisters to the sternum, were the other expedients resorted to. By the twelfth day from the accident, all alarming symptoms had subsided; and from that time the patient gradually recovered: The extensive lacerated wounds, however, were scarcely closed at the end of nine weeks. Sir William Blizard attended the patient during the period of danger, and some other eminent surgeons occasionally saw him.

There can be no doubt, then, that Mr Tipple was impaled by the shaft of a gig, which from the "tug-iron," that impeded its further entrance, to the extremity which entered the boarding of the chaise-house, "measured twenty-one inches," nearly five of which had penetrated the boards, after passing through his body. The patient felt much soreness under the sternum, even to the time of compiling this account; and it seems clear, that the shaft had passed anteriorly, pressing the lungs and heart behind it, and scraping the posterior surface of the sternum. From all that he observed, and could collect from the Lawrances, Mr

Maiden says, "I have no hesitation in declaring my firm belief, that the shaft being small at the tip, and of a wedge-like form, was forced between the ribs on the left side, into and through the cavity of the thorax, under the sternum, and out between the ribs; not suddenly, but by several distinct movements, whence the lungs, large blood-vessels, &c. escaped fatal injury." p. 26.

The following is the admeasurement of this intruding shaft. "Ten inches of the shaft from the extremity is square: the tip measures an inch and three sixteenths by three quarters of an inch, and, by being bevelled off nearly the eighth of an inch, is unusually small. The middle of that part of the shaft which entered Mr Tipple's chest, where the square terminates, measures five inches and a quarter: the part where the tug-iron is fixed measures six inches;"—we presume, in circumference.

In a supplementary page, we are informed that Mr Tipple's digestive organs, which had been previously in a weak condition, are thought to be better since the occurrence;—but that his general strength is much impaired, his breathing upon exertion becomes difficult, and his sense of soreness in the breast remains undiminished. We are also informed, that there is now a depression of two or three of the cartilages, on the left side of the sternum, making a hollow which did not exist before the accident; and that the *cicatrice* (in what vocabulary did Mr Maiden find this word?) of the wound by the shaft, on the left side, is near *to* the fifth rib; on the right, somewhat lower.

Thus we have put our readers in possession of all that is marvellous in the case of this hapless citizen. With respect to the instruction to be derived from it, we have some difficulty in deciding as to the propriety of detracting *twelve pounds* of blood in the course of about a week,* as the state of the pulse, skin, tongue, and general habit, is never described, and scarcely alluded to; as well as in determining how much would be left, to carry on the purposes of the vital functions. This prodigious depletion might possibly be requisite; but at all events, while it does not enable us to explain the emendation of the condition of the digestive organs, it affords a distinct explanation of the patient's impaired strength. The "recovery" alone is not conclusive evidence upon this point.

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* *Seriatim* as follows. On Saturday night, June 13th, "*four pounds*, avoirdupois weight:" on Monday morning, 25th, *thirty* ounces: on the 16th, *eighteen* ounces: 17th, *seventeen* ounces: 18th, *twenty-two* ounces: 20th, *nineteen* ounces: and on the 22d, *fourteen* ounces.

III.

The Morbid Anatomy of the Liver: being an Inquiry into the Anatomical Character, Symptoms, and Treatment, of certain Diseases which impair or destroy the Structure of that Viscus. Order I. Tumors: Part I. On the Tubera Circumscripta, and Tubera Diffusa. By J. R. Farre, M. D. Large 4to. pp. 24, with two coloured Engravings. 1812. Longman & Co.

We have great pleasure in announcing to our readers the first fasciculus of a work, which is obviously the result of much personal observation and laborious research, in a very important department of morbid anatomy; and which, from the execution of the present specimen, bids fair to throw considerable light on a class of diseases, respecting which we are apt to think and to speak with some want of precision. With the indefinite views that are commonly attached to the terms *scirrhous liver*, *liver-disease*, &c. it is impossible that the practitioner can exercise much discrimination in the choice of his curative measures: and, in fact, it but too commonly happens, notwithstanding the varieties of morbid condition which those terms comprehend, that one system of practice is pursued, as if the organ in question were subject but to one modification of organic disorder. To correct these indistinct notions upon the subject, nothing seems to be better calculated than an arrangement of the various changes to which the liver has been found liable, more especially when accompanied by accurate delineations of the morbid conditions, and by histories of the symptoms, which had occurred during the progress of these changes. Such a combination, uniting the advantages of the methods adopted by Morgagni and Baillie, has never before been presented to the public; and from the excellence of the delineations exhibited in this work, nothing short of the actual exhibition of the diseased viscus itself is left unsupplied. Of the latter, the reader can only estimate the perfection by inspecting the work itself; but of the objects of the publication, and of the contents of this fasciculus, we shall endeavour to present him with a faithful account.

Dr Farre informs us, in his introduction, that his treatise will be limited at present to the investigation of *tumors*, *scrofulous* affections, and the consequences of *inflammation* of the liver, which, we presume, will constitute the three Orders of his classification. These varieties of disease, he observes, impair the structure of the liver in different modes.

> " For tumors are chiefly injurious to it by their unlimited powers of growth or multiplication; but inflammation simply disorganizes the liver by obliterating its structure. Hence the ultimate state of the former, is the utmost degree of enlargement which is compatible with life; of the latter, rather a reduction of bulk, but an increase of solidity. Scrofula only proves destructive to the structure of organs when its tubercles inflame: the disorganizing effect of this disease on the liver is therefore analogous to that of inflammation. "

By the word Tumor, which characterizes the first Order to which our attention is at present directed, the author does not mean a mere intumescence or enlargement of the viscus; but, following the example of Mr Abernethy, he designates, as tumors, those swellings which arise from a new growth, differing from the original composition of the part affected. Whence he defines *Tumors* in these words: " Swellings, either circumscribed or diffused, generally differing in the structure from the natural textures of the affected organs, and increasing in bulk by an inherent growth. "

The first genus of Tumors which occupies this fasciculus, he has denominated *Tubera*, and defined " Tumors of a cellular structure and fungous nature, producing in general remarkable elevations on the surfaces of the affected parts. " Thus it appears, as well as from the appropriation of the term Tubercle, in the passage above quoted, to the scrofulous affections of the liver, that our author does not consider the latter as a diminutive of Tuber, but as totally distinct in its signification, and not implying the *fungous* and cellular structure which belongs to the Tuber. The varieties of these fungous *tubera*, Dr Farre arranges under two heads or species, with the epithets *circumscripta* and *diffusa*, the characteristics of which are detailed with much perspicuity.

1. The *Tubera circumscripta* are so denominated, because they are determinate in their figure: they are likewise distinguishable from the other species in being found only in the liver, seldom or never originating, the author seems to believe, in any other structure of the body. This tuber is the same with the " large, white tubercle of the liver, " described by Dr Baillie in his " Morbid Anatomy, " chapter IX, and figured in his 5th fasciculus of engravings, Plate III, fig. 2 and 3. Dr Farre observes, in a note, that it is with extreme reluctance he ventures to propose another name for this disease; but, he adds, " the epithets ' *large, white,* ' are not characteristic, being common to

both species, and belonging indeed in a more remarkable degree to species II. It seemed to him also objectionable to apply the term, *Tubercles*, indifferently to these large tumors; to certain irregularities of surface produced by chronic inflammation, and to scrofula." Whatever inconvenience the multiplication of synonymes may occasion, the greater approximation to accuracy will certainly more than counterbalance it.

Dr Farre proceeds to describe the characteristics of the tubera circumscripta, which cannot be stated to the reader so satisfactorily as in his own words.

"CHARACTER. Their colour inclines to a yellowish white; they elevate the peritoneal tunic of the liver; and their projecting surfaces, slightly variegated with red vessels, deviate from a regular swell by a peculiar indentation at or near their centres, which are perfectly white and opake. They vary much in size, which depends on the duration of each Tuber; for at its first appearance it is very minute, but during its growth it assumes the character above described, and at its maturity exceeds an inch in its diameter. They adhere intimately to the liver, and their figure is well defined. In the interstices of the Tubera, the liver is paler and more flabby, its cohesion is weaker than natural, and slight effusions of blood are sometimes found. They commonly remain distinct at the surface of the liver; but internally they ultimately coalesce, and form immense morbid masses which pervade its substance. The patient often lives until the mass occupies the greatest part of the abdomen, and the natural structure of the liver is nearly supplanted. They possess so close a cellular structure, that the section of them, at first view, appears solid and inorganic; but on the edge of the knife, by which they have been dissevered, an opake white fluid, of the consistence of cream, is left, and a fresh portion of this fluid is gathered on it at each time that it is repassed over the surface of the section. Their cellular structure becomes more apparent after long maceration." p. 6.

The engraving, which represents the state of disease above described, is one of the happiest specimens of the pencil and the graver that we have ever seen executed on an anatomical subject: it almost supersedes the necessity of actual dissection, so true and faithful is the picture. The preservation of the colour of the different parts is a most important advantage over the best engravings in black. So far as a knowledge of the actual state of disease in this condition of the liver can be communicated; so far as the results of anatomical research can enlighten us, this work most fully accomplishes its end, and is entitled to unequivocal commendation. But as we some time ago took occasion to express our dissent from the popular doctrine, that a minute knowledge of the anatomy of the human body, in health, is the best or almost sole foundation of the science of pathology and of the practice of physic;* so we cannot but remark, with regret, at present, how little even this most lucid display of the results of morbid anatomy contributes to extend the practical powers of our art. The author, with a candour equal to his ample knowledge of the subject, gives the following account of the diagnostic appearances, by which the state of the liver is indicated during life.

"SYMPTOMS. The patient suffers pain in the region of the liver, languor, loss of appetite, and cough; *but until the liver, by the growth of the Tubera, descends below the hypochondria, a distinct judgment of the case cannot be formed.* Then the functions of the alimentary canal are more impaired, the body wastes, and the enlargement of the liver, its hardness and remarkable irregularity of surface, may be distinguished through the parietes of the abdomen. In the advanced stage, the patient is distressed by its enormous bulk, the respiration is oppressed, he bowels are prone to diarrhœa. Neither jaundice nor serous effusion into the peritonæum are symptomatic of this disease; they may be conjoined; but it is an accidental circumstance, rather than a necessary consequence." p. 7.

The result, then, in this instance, as in many other cases of chronic derangement of structure in the viscera, to which the fullest investigation conducts us, is, that before the symptoms which are sufficient to point out the exact seat and nature of the disease, unequivocally manifest themselves, the structure of the organ is irretrievably ruined:—before we learn to what point we should direct our remedies, all remedies are become useless. We remember to have heard a remark, made by a person unacquainted with medicine, relative to the character of an eminent cultivator of morbid anatomy;—that "he was possessed of a singular talent in *distinguishing* diseases, but that he was incapable of *curing* them, when detected." The remark should have been applied to the science, and not to the professor. For, in truth, to what unessential ends does not the sum of the knowledge of the morbid anatomist frequently conduce! to the naming of the viscus, which is the seat of an incurable malady! to the clearing up of a doubt, whether a tumor, which no medicine can reach, be situated in the spleen, the mesentery, or the omentum! to determine the presence of pressure or morbid growth in the sensorium, which, if exhibited to the eye, like honeycomb in a hive of glass, would defy the exertions of medicine and surgery!

But, it may be said, discrimination of diseases by their symptoms, is the first characteristic of an able physician; that every improvement of this art is an approximation to a better practice, and that it is impossible to set limits to the advancement of human skill, while pursuing knowledge upon the basis of observation. We admit the truth of the remark, and are far from intending to decry the pursuits of the morbid anatomist, by the digression which we have just made. We wish only to affix a right estimate to the degree of knowledge which is thus to be obtained, and not to mistake the information that is curious, for that which is useful: we shall see, before we conclude, that our author modestly limits the practical benefits to be derived from the facts which he has here promulgated, to the prevention of injurious measures.

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* See the Inquirer, Edin. Med. and Surg. Journal for Jan. 1809. Vol. V.

It is a singular fact, which we also have witnessed, that, when the mass of tuberated liver nearly fills the whole abdomen, so that the hardened and irregular edge of it is felt extending from the spine of the ilium across to the umbilicus, or even lower, neither ascites nor jaundice shall exist. In consequence, probably, of the lax and flabby texture of the intersticial parts among the tubera above stated, the circulation of the vena portæ goes on with little interruption. And it is scarcely less surprising, to what a great extent this morbid growth has often attained, before it is detected, or any considerable inconvenience is produced by it.

Dr Farre has related two cases, in which this fatal disease of the liver attacked men subject to gouty affections, and frequent indispositions, which were ascribed to cold or indigestion, both of whom had been intemperate in early life. The second patient, whose liver is represented in the plate, had suffered irregular paroxysms of pain in the epigastrium; but when he consulted a physician at the end of March, 1811, he complained only of "cough and uneasy sensations in the epigastric and right hypochondriac regions." When the naked abdomen was examined, the liver was felt projecting into the umbilical region, filling the whole space of the abdomen, which is between the umbilicus and the margin of the thorax. This part of the belly was tumid and hard, presenting a surface irregular, from tubera which could be distinctly felt under the integuments. Yet the patient positively affirmed, that he had noticed the enlargement only six weeks before this period: and his cough and dyspnœa were not greater in degree than it was fair to impute to the great bulk of the liver. His pulse was natural, but his appetite defective, and the bowels rather torpid. "There was no obstruction to the circulation of blood through the liver, for there was no effusion into the peritonæum, nor to the flow of the bile; for the skin and urine were not in the slightest degree jaundiced."

The principal attempt made by medicine was to regulate the bowels by rhubarb, and to allay pain or procure sleep by opium. The patient died in the beginning of July; and the body was examined on the following day.

> "The liver occupied the hypochondriac, epigaſtric, and umbilical regions: a line drawn acroſs the anterior ſuperior ſpinous proceſſes of the ilia would have defined its extent; ſo that, a few convolutions of the ſmall inteſtines in the hypogaſtric region excepted, the diſeaſed liver alone appeared, after the ſection of the abdominal parietes had been completed. The liver was removed. Its ſurfaces were covered with tubera: more than fifty were counted on its concave ſurface, and on its convex ſurface there was a ſtill greater number. All theſe tumours had the ſame character, (ſee Plate I.) viz. a circular margin, elevated, firm, and white, with a depreſſed and very white centre, reſembling a cicatrix. The only deviation from this character was occaſioned by a coaleſcing of two tubera, by which their figure was changed to an irregular oval. Beſides theſe mature tubera, a countleſs number of them in their incipient ſtate appeared in all directions, &c." p. 13.

Dr Farre has only met with one variety of this species of hepatic tuber, which differed from the preceding chiefly in the smaller size and firmer consistence of the tumours. Although he has seen two cases of this disease, in which there was at the same time a scrofulous condition of the mesenteric glands; yet he is inclined to dissent from the respected authority of Dr Baillie, who deems the tubera circumscripta of a scrofulous nature. The strumous tubercles of the liver Dr Farre considers as differing essentially, both in their character and termination, from the fungous tubera; and this difference, he contends, is farther evinced by the consideration of the very distinct texture of the tubera diffusa, with which the T. circumscripta is obviously allied.

2. The *Tubera diffusa*, and the very equivocal means of diagnosis which present themselves to the view of the practitioner, are briefly described by our author in the following terms.

> "Character. Theſe tumors not only pervade the ſubſtance of the liver in a diſtinct or in a confluent form, but alſo appear at its surface, elevating more or leſs its peritoneal tunic. They riſe from the ſurface of the liver with a more gradual and uniform ſwell than the Tubera circumſcripta, and are, in different ſubjects, of various figures, ſizes, colours, and conſiſtence; often pulpy. No texture ſeems to eſcape the ravages of this fungus. It appears indifferently in all the viſcera; in the cellular membrane, and even in the bones.
>
> "Symptoms. Theſe vary in proportion to the varied ſeats of the diſeaſe: the diagnoſis, therefore, muſt depend on one of the cir-

cumstances from which its name is derived, viz. its dispersion through many textures of the body. But when this disease affects the liver in particular, then the symptoms will not materially vary from those which accompany the Tubera circumscripta." p. 15.

Of the tubera diffusa there are many varieties, (which will be the subject of discussion in the next fasciculus), agreeing with the T. circumscripta in their cellular structure, and with each other in their coexistence with the liver and other organs of the body. From this circumstance, that many organs are at the same time oppressed by their growth, they are in general more speedily fatal than the T. circumscripta: but instances of the diseases are not unfrequent, in which the other viscera are infested with these tubera, while the liver is altogether free from them. With this variety in the seat of the tubera in the different organs, the symptoms must necessarily vary extremely: and in fact, no two diseases could differ more widely in their phenomena than the two cases of the T. diffusa related by Dr Farre.

In the former of these cases, the first symptoms were a cough and diarrhœa, which were followed, after several weeks, by an enlarged belly, as the liver descended below the umbilicus, and at length by symptoms of hydrothorax, of which he died six months after the distension of the abdomen commenced. On dissection, some serous effusion was observed in the sacs of the peritonæum, of the left pleura, and of the pericardium: the liver was found enormously large and tuberous, weighing upwards of fifteen pounds; and at the same time, from the mucous coat of the stomach, near the cardia, there grew a cluster of tubera, that projected into its cavity, which were not sufficiently advanced to interrupt the course of the alimentary matters, and had not therefore been suspected. The remarkable increase of bulk in the liver was occasioned by the growth of Tubera, which differed from the T. circumscripta in the following circumstances.

"They were less numerous; for, on the concave surface of the liver their number did not exceed twelve: they were as minute at their beginning, but at their maturity considerably larger, their diameters being rather more than three inches: at no period of their growth were they externally indented, but, on the contrary, they rose from the liver with a gentle and uniform swell, each being either round or oval; their external surfaces had a motley appearance, their white colour mingling with the brown colour of the liver: but a section (Fig. I. Plate II.) displayed the appearance of the Tubera distinct from the substance of the liver, on which they seemed continually to encroach, and to approximate to each other by waving margins: their texture was coarser, but it yielded a similar whitish fluid." p. 17.

In the second case, the principal symptoms were seated in the head: there was excruciating headach, increased to torture by motion, and aggravated in regular daily exacerbations, accompanied with some cough, nausea, vomiting, frequent pulse, and subsequently with slight delirium and convulsions. The disease terminated fatally in about two months; and on dissection the Tubera in question were found in the following situations: namely, one, somewhat larger than a pigeon's egg, in the medulla of the hemisphere of the cerebrum; another, of smaller dimensions, in the posterior part of the same hemisphere; and vestiges of smaller ones in the cerebellum and corpora striata;—one of large size occupied the seat of a lymphatic gland, under the left angle of the inferior maxillary bone;—and round one of the right bronchial glands, as a nucleus, an immensely large tuber had formed;—in the liver, there was a single tuber, which in structure resembled that in the lung;—and to the adipose tunic of the left kidney, a tuber, of eight inches in circumference, was attached. How vain the administration of mercurials, of cinchona, of rhubarb, of antimony, and even opium, with the application of blisters, proved, even for the alleviation of present distress, it is unnecessary to state: But this consideration leads us to the inferences with which Dr Farre concludes this fasciculus.

"The investigation of Disease by Anatomy," he remarks, "not only improves the diagnostic part of medicine, by connecting, as far as it can be done, the sign with the morbid change; but it also improves the therapeutic, by gradually *separating curable from incurable* disease, or by indicating the stage at which the former is converted into the latter. It is therefore one important use of Morbid Anatomy, to point out the boundaries beyond which it is not only unavailing but *injurious for art to interfere*, except to diminish suffering. I venture to oppose this truth to the reverse practice, apparently founded on a maxim, that if an organ be subject to many obscure diseases, of which one or more can be cured, but the others are incurable, then all should be treated like the curable disease." p. 21.

His allusion is obvious: and he goes on to explain, that, as far as his observation has gone, the operation of *mercury* is not beneficial to patients afflicted with the diseases here described. He justly observes, that few medical men now think of trying such a course of medicine for the removal of tumors, (in the restricted sense), when they appear externally: and still less effectual can it prove in the cure of either the tubera *circumscripta* or *diffusa*: "for by the time that the most careful examiner can distinguish them, the progress of the disease has been already so considerable, that the *mercurial action tends only to exhaust powers, which art will subsequently in vain attempt to restore.*" With the view of leaving no instruction to be casually inferred by the reader, Dr Farre candidly admits, that, in three of the four cases, *too much was done* by ineffectual efforts to cure; while in the remaining instance, a mere palliative plan effected all that medicine was capable of,—" it clearly diminished, but did not inflict any suffering."

Although we cannot but lament, that the benefit produced by the cultivation of morbid anatomy is in these cases but negative; yet, as it effects all that human research can accomplish, we most fully accord with the concluding sentiment of our author, that " this view of the subject is not derogatory: for the perfection of medicine consists, not in vain attempts to do more than nature permits, but in promptly and effectually applying its healing powers to those diseases which are curable, and *in soothing those which are incurable.*"

We shall look anxiously for the succeeding fasciculi of this elegant work, as well as for the smaller publication on a similar subject, announced by Dr Farre, in conjunction with Mr Travers, and intended to appear periodically. The simplicity and candour of the opinions advanced in the treatise before us, as well as the according accuracy of the descriptions and graphic delineations which it contains, lead us to anticipate with confidence, that his labours will ultimately put us in possession of a more complete knowledge of the varieties of morbid change which the viscera undergo, than is to be obtained from the works of his predecessors.

IV.

The Morbid Anatomy of the Human Gullet, Stomach, and Intestines. By Alexander Monro, Jun. M. D. F. R. S. E. Professor of Medicine, Anatomy, and Surgery, in the University of Edinburgh, Fellow of the Royal College of Physicians, &c. &c. &c. Edinburgh. 8vo. pp. 567.

In the preceding article we have endeavoured to place the importance of the study of morbid anatomy in a just point of view. The information which it furnishes is always interesting, frequently useful, and never to be neglected; but its influence on the practice of medicine is neither so direct nor so extensive as many have represented. Of the truth of these opinions the work before us furnishes many proofs. We shall begin our examination of it with a few general observations intimately connected with its plan.

Morbid anatomy may be prosecuted either with the view of merely ascertaining the varieties of appearance, structure, or form, of which the different organs of the body admit, or of connecting these, as causes or effects, with the symptoms observed before death. Both are eminently useful, but in different degrees. The former is, with some anatomists, the ultimate object of their pathological labours; and indeed, on many occasions, from our ignorance of the history of the disease, we can go no farther; but it is still to be considered as merely elementary, and subservient to the attainment of the latter and higher object; and hence an accurate detail of the preceding symptoms is no less necessary to render a morbid dissection perfect, than an account of the appearances on dissection to complete the history of a disease. Their combination has been attempted by Dr Monro, in the very valuable work before us, which, we are informed,

"consists of two parts: The first containing a description of the morbid appearances discovered by dissection; the second a relation of the symptoms which preceded the patient's death. On this relation a comparison is instituted between the symptoms which preceded death, and the appearances discovered by dissection." p. xvii.

Again: "Where the diseased appearance is so frequent as to admit of generalization, particular illustrations seem superfluous; but where a diseased appearance is singular or uncommon, it then becomes necessary to enter into a fuller detail, by an insertion of particular cases; for these, as Mr Abernethy has justly observed, 'will probably convey more information in less words, than description or narrative, as they identify the kind of disease which is meant to be described, and inform as it were by example.'" p. xviii.

We have, however, to lament, that general views so correct should be so frequently deviated from in the work itself. Sometimes the comparison is altogether omitted; at other times there is no enumeration of symptoms. On some occasions the appearances and symptoms are so far removed from each other, that their relation does not naturally occur; and, in general, varieties of appearances, as well as varieties of symptoms, are grouped together, so that they do not admit of comparison. Hence we regret that one or two well selected examples had not been more frequently preferred, as the means of illustrating particular affections.

In like manner, there are two distinct methods of systematizing the results of our pathological inquiries. They may either be classed according to the organs or structure of the body affected, or according to the diseases in which they occur. The latter mode is best suited to the nosographist, and the former to the anatomist. It has accordingly been adopted by Dr Monro.

The last general point of view in which we shall consider a treatise on morbid anatomy, is with a reference to the sources from which the materials are derived. Some writers, as Voigtel, have rested their reputation chiefly upon their industry in compiling, and judgment in arranging all that has been written upon the subject; while others, as Baillie and Walter, have endeavoured to merit the praise of originality, by confining themselves to the description of their own collections, and of the observations which have occurred in their own practice; and many have combined both methods, more or less perfectly. Of this difficulty, Dr Monro seems fully sensible in his preface.—"Before concluding, I cannot refrain from stating, that I have not attempted, by means of numerous quotations, to render my book an index to those already published; and, to enter into an exact criticism of the works of preceding pathological authors, would exceed my present purpose:"—And yet it is want of due attention to these considerations which constitutes, in our opinion, one of the leading defects of Dr Monro's Morbid Anatomy. We could excuse the insertion, in a foot-note, of a string of references transcribed from Ploucquet, but we must unequivocally condemn the insertion, in the text, of statements, certainly not consisting with our author's personal knowledge, and for which the original authors are not referred to, if, indeed, they were consulted. Had Dr Monro contented himself with describing accurately the series of preparations in the valuable and extensive museum, which the University of Edinburgh owes to the zeal of his father and grandfather, and in the collection made by himself, and with arranging, along with his own observations, those of his predecessors in the anatomical chair, and his correspondents, he could not have failed to produce a *classical* work, which would have extended his own reputation, along with that of the school to which he belongs. It might then have been consulted and quoted, with perfect confidence as to the accuracy of the facts contained in it; because the Drs Monro and their correspondents were responsible for their truth. The value of such a work might have been still further increased by occasional comparison with similar facts already on record. But this should never have been done unless when it was attended with manifest advantage, nor until after the severest scrutiny of the accuracy of the reporter. We regret, therefore, most sincerely, that Dr Monro has buried his original and authentic matter under a mass of compilation, and deteriorated its quality, by blending them so together, that it is impossible to separate them.

In an introduction, Dr Monro enumerates the advantages resulting from the study of morbid anatomy; the circumstances which directed his attention peculiarly to it; his opportunities of cultivating it; his reasons for making it the subject of a separate course of lectures, and the plan of his present publication. As the propriety of disjoining the morbid from the healthy anatomy always appeared to us doubtful, upon the grounds that they were most advantageously taught in conjunction, and as our doubts have been strengthened by experience, it is but fair to allow Dr Monro to state his reasons for so important an innovation.

"In the University of Edinburgh, the importance of Morbid Anatomy to the liberal and scientific study of medicine, has always been sensibly felt; and both my grandfather and father endeavoured, as far as their other duties allowed, to introduce the most prominent features of that science into their lectures on anatomy, physiology, and surgery.

"But in a course of medical instruction, comprehending so wide a field of inquiry as had been assigned to their charge, even though the term of lecturing extended to six months, it may easily be supposed, that only a small portion of time could be appropriated to a branch of the subject still overlooked or undervalued, and but too generally left, in the hurry for obtaining what was erroneously conceived to be more essential information, to the research and experience of a more advanced period of life.

"The opinions of professional men are now more enlarged; and this department has become so interesting, and promises such valuable and extensive assistance to the healing art, that it can be treated with complete success only when it is converted into a distinct object of study.

"These considerations, strongly impressed on my mind by the practice of my predecessors, and by the general current of medical opinion, induced me to deliver a separate course of lectures on morbid anatomy, and to prepare the materials of the following work." p. xiv, xv.

There is, no doubt, some weight in these arguments; but, in opposition to them, we shall first state the opinion of Dr Monro himself.

"There is reason to apprehend, that some students of medicine are not sufficiently apprized of the importance of morbid anatomy, and of the light which it reflects upon the diagnosis and treatment of many diseases: hence they direct their attention chiefly, or almost solely, to the anatomy of the body in its sound state." p. vi.

But the natural consequence of their separation is, that the great majority of students now learn nothing of morbid anatomy. With their time and their means often limited, they are unwilling to attend two courses of lectures, where one used formerly to serve; and they content themselves with that which is indispensable. But even in a different point of view, the disunion appears to us injudicious. It has deprived the university lectures of a decided superiority over all private courses, and of their chief recommendation to gentlemen who have already made considerable progress in the study of anatomy. With students, these considerations are of such weight, that we are convinced, that, by reuniting the morbid to the healthy anatomy, Dr Monro would not only lessen his labours, but advance the progress of his favourite study, and greatly increase the number of his pupils.

We cannot agree with Dr Monro, that the importance of morbid anatomy is generally undervalued; neither can we subscribe to his opinion, that it has hitherto been overlooked, and is to be considered as an almost new and unexplored field of study. That new facts are occasionally discovered, and that many remain to be discovered, we will readily admit; but we very much doubt, that practitioners in general possess so extensive an acquaintance with morbid anatomy, as when Morgagni's Epistles were found in every physician's library; and we are certain that these still continue to be incomparably the most valuable work in that department of knowledge.

We now proceed to give some account of the plan and nature of Dr Monro's work. In his general observations, he divides the organic diseases of the alimentary canal into six classes.

"The first class comprehends the explanation of the morbid effects which have resulted from hurtful substances swallowed by design or accident.

"The second class, the organic affections peculiar to the coats of the alimentary canal.

"The third, the nature and distressing consequences of the displacement of a part of the alimentary canal.

"The fourth is dedicated to an explanation of the various malconformations of the alimentary canal.

"The fifth, to a description of worms which occasionally infest the alimentary canal.

"And, the 6th, to an enumeration of the causes which lead to an enlargement of those neighbouring organs, which, by pressing upon the alimentary canal, prove a mechanical obstruction to the progress of its contents." p. 6, 7.

We shall make a few observations on each of these in order. The particulars comprehended in the first class do not exactly correspond with its definition, as we find sections allotted to calculi formed in the tonsils and intestinal canal, and substances swallowed without producing morbid effects; as well as to poisons and bodies producing injury from their mechanical properties. Of this chapter the most interesting and original section is that which treats of intestinal concretions. These singular bodies had attracted the notice of our author's grandfather, and more especially of his father; so that, by their united industry, the Museum of Edinburgh contains no fewer than forty-two specimens. Their specific character consists in their being chiefly composed of very fine short fibres of a tawny brown colour, matted together promiscuously, as in hat or chamoy leather, frequently in layers, alternated with layers of a grey earthy substance, grains of which are commonly also interspersed among the fibres. They often contain an extraneous nucleus, such as a cherry-stone, or biliary calculus, and vary from the size of a pea to that of a mass weighing four pounds. Their shape is very various, but always more or less rounded; and, when not covered with an earthy crust, their external surface feels like velvet, and may be compared to that fine brown skin which covers the budding horns of the deer. As this species of calculus has altogether escaped the notice of Fourcroy and Vauquelin, Dr Monro prevailed upon Dr Thomas Thomson to analyze it. According to this celebrated chemist, the average specific gravity is 1.4, though when first thrown into water it swims; and, besides some albumen, muriate and sulphate of soda, phosphate and perhaps sulphate of lime, it contained two substances, which Dr Thomson considers as peculiar, and of a different nature from any hitherto examined. The first was only in very small quantity. It dissolved at first in water, but became nearly insoluble by the slow evaporation of the liquid, and it dissolved in alcohol. Dr Thomson considers it as approaching most nearly to vegetable extractive. The other non-descript substance is much more important, as it constitutes the mass of the concretion; and the knowledge of its nature alone can explain its origin. We shall, therefore, in regard to it, quote Dr Thomson's own words.

" After the action of all theſe re-agents (water, alcohol, potaſh ley, and muriatic acid), there remained behind a peculiar ſubſtance, having the colour and texture of the calculus. Ten grains of calculus left 1.2 grains of this matter. It was very light, and had the appearance of cork, or rather of the peculiar fungus which is uſed on the Continent for tinder, and which the French call Amadou. It was in very ſhort threads. This ſubſtance is taſteleſs, inſoluble in water, alcohol, ether, potaſh ley, and muriatic acid. It blackens ſulphuric acid, and is diſſolved, being partly reduced to charcoal. In nitric acid it diſſolves very ſlowly, and only when aſſiſted by heat, and hardly efferveſces. When the ſolution is evaporated to dryneſs, a whitiſh reſidue remains, which has a bitteriſh taſte, and is imperfectly ſoluble in water. Nitric acid does not convert it into any of the vegetable acids, though digeſted on it repeatedly. This ſubſtance burns with a ſlight flame, and rather like a vegetable than an animal body. It is undoubtedly of a peculiar nature, differing from every animal and vegetable ſubſtance hitherto examined. Its inſolubility in potaſh ley diſtinguiſhes it readily from wood. It has no reſemblance to any animal ſubſtance whatever." p. 46, 47.

ed of the accuracy of Dr Thomson's experiments;
be permitted to dissent from his conclusion as
singular substance must either have its origin
or be an inorganic animal product. The
radicted, both by its *fibrous* texture, and
getable substances; and the former is
e idea that it is an unusual and un-
hstanding the alleged distinction
nded on the solubility of the lat-
er in potash ley, we are convin-
s and experiments, that it is a variety
g as such the fibrous parts of leaves, &c.
of water and alcohol. This idea of its na-
firmed by the ready explanation it affords of the
se concretions. If a portion of vegetable food be,
accident, arrested in its passage through the intestines,
retained in some angle or sac, every thing which is soluble
or digestible will be removed by the action of the intestinal fluids and the absorbents, and, at last, nothing will remain but the woody fibre in a state of extreme division. When a nucleus is thus once formed, or furnished, by the retention of a cherry or plum stone, it will excite an increased secretion of intestinal fluid, from which phosphate of lime will be deposited in the interstices of the fibres of the nucleus, and upon its surface, while accessions of fecal matter will give rise to additional laminæ.

The symptoms occasioned by the presence of these concretions, are thus described by Dr Monro.

" Alvine concretions prove a source of much irritation, and impair the functions of the stomach and intestines, creating at the same time much griping, and sometimes very acute pain.

" The pain in the bowels is, in some cases, fixed to one part; is much more severe upon one occasion than another, especially after taking acids, or food of difficult digestion; and is frequently attended by nausea and vomiting.

" Some patients are much constipated for two or three days, and have yet a constant inclination to go to stool. Others have watery stools, and discharge, along with these, a quantity of a viscid ropy mucus, or blood, after which they are much relieved.

" Some patients discharge their stools involuntarily.

" Upon relaxing the parietes of the abdomen, a very hard, painful, globular tumor may generally be felt, most frequently in the course of the large intestines.

" It can seldom be made to change its place within the intestines; but often appears to do so in consequence of the change of place of the intestine which contains it. Hence the change appears greatest where the concretion is within the small intestines or arch of the colon, which, from the length of mesentery, or mesocolon, are very moveable.

“ The digestive powers being much impaired, the patient becomes very weak, and much emaciated; and, from the continuance of the disease, is reduced to a skeleton.

“ The pulse, in the earlier stages of the disease, is but little affected.

“ Concretions have, in some cases, remained for years before they have been dislodged.

“ In the more fortunate cases, the concretion, after exciting severe nausea and vomiting, has been ejected along with the contents of the stomach, or discharged by stool, or extracted from the rectum.

“ It is not a little remarkable, considering the bulk of some of these concretions, that the intestinal canal is not more frequently completely obstructed.

“ The intestines, from the duration of the disease, become more and more obstructed, so that laxatives by the mouth, or clysters, are necessary to procure a passage. Some patients are under the necessity of abstaining from solid food.

“ Upon the alvine concretion changing its place, and passing down into the sigmoid flexure of the colon, or into the rectum, it creates excruciating torture in the region of the pelvis, and the bowels become much distended, from the passage being suddenly interrupted, and the patient apprehends instant death.” p. 48—50.

“ Alvine concretions sticking in the rectum may be felt with the finger, and in some instances occasion a retention of urine.

“ An alvine concretion lodged in the rectum, only a little way above the sphincter ani, sometimes creates much pain while the patient is sitting; and the pain becomes still more excruciating upon his going to stool.

“ When the rectum has become very much distended, in consequence of the alvine concretion, it sometimes is discharged along with the feces; or it may be readily extracted by the forceps, as in the preceding case; and when there are two or more concretions within it, upon extracting one of them by the forceps (which are used for extracting calculi from the bladder of urine), the others are commonly discharged along with the feces.” p. 51.

Upon the very bold operation of cutting out these concretions when lodged in the colon, proposed by Dr Monro senior, and recommended by our author, we think it our duty to state, that the diagnosis is so difficult, that, in one case where the operation was strongly advised, it turned out, upon dissection, that the disease was a scirrhous pylorus.

The next disease noticed is the formation of calculi in the tonsils, a very rare occurrence; and it is remarkable, that the three examples in Dr Monro's museum were all communicated by one gentleman. These concretions were analyzed by Dr Thomson, and consisted of albumen, combined with phosphate and carbonate of lime.

Section fourth treats of the effects of arsenic, and has disappointed us very much. It contains only one sentence, which we conceive to be properly placed in the work before us, and that not free from ambiguity. "When taken in any considerable quantity, it produces the most violent inflammation of the inner coat of the gullet and stomach, which is rapidly followed by gangrene, which, as two preparations in the Museum of Edinburgh show, is not limited to the internal surface of the stomach, but which extends to all the coats of that organ." We should have preferred very much a *direct* description of the appearances which these two stomachs exhibited in their recent state, to the whole of this section. When the stomachs of animals poisoned with arsenic are kept for some time, the parts which, in their recent state, were merely inflamed, acquire a dark appearance, resembling gangrene; and that this is not owing to the reduction of the arsenic, from the state of white to that of black oxyde, as has been supposed, is proved by its occurring in the stomachs of animals killed by its external application. In the numerous experiments we have made, we have never met with gangrene or erosion, even from the largest doses. In the observations collected by Dr Monro from other authors, there are evidently some errors. We reckon among these, "It has been proved by repeated observations, that two grains of this oxyde prove fatal to man in a short time." It is possible that two grains may kill, but that it has been *repeatedly proved*, we doubt. Again, "Upon opening the stomach, we sometimes meet with the poison adhering to the villous coat of the stomach, and the arsenic is found in its *metallic* state." We do not believe that it was ever found in such a state. The original experiments made with metallic arsenic, and the artificial sulphuret, are quite out of place; as they throw no light on the morbid anatomy of the intestinal canal.

The third chapter treats of the organic diseases of the alimentary canal.

"There have been two very different plans followed by authors, in treating of this subject. By the one, all the organic diseases of the pharynx and gullet are described under one head; those of the stomach under a separate head; and those of the intestines under a third head. But such a plan seems to me liable to many well founded objections.

"By the other plan, the organic derangements of the villous coat of the pharynx, gullet, stomach, and intestines, are explained in one chapter; those of the cellular coat in a second; those of the muscular coats in a third; and those of the peritoneal coat in a fourth chapter." p. 108.

Dr Monro states his reasons for preferring the latter arrangement.

"There are many advantages peculiar to this mode of prosecuting pathological inquiries.

"It points out how far organic diseases are modified by the structure, function, and situation of the part affected; and it saves much unnecessary repetition in the description.

"This method of distributing the subject into parts, is not artificial and arbitrary, neither is it unnatural: for it has an immediate reference to the manner in which many organic derangements take their origin; these being limited at first to one of the coats of the alimentary canal, and being propagated to the other coats only in consequence of their continuance. It is founded, therefore, upon the principles of philosophical induction.

"This view of the subject suggests a corresponding division of the symptoms, viz. into those which are general, and characteristic of all the organic diseases of parts of a similar structure; and into those which are accessory, and which originate from the peculiar function and situation of the part affected. 'The great difference of the symptoms,' says Dr C. Smyth, 'is more owing to a difference in the function of the part inflamed, than to any specific difference in the nature of the inflammation, which, in most instances of visceral inflammation, is nearly of the same kind; terminates in the same manner; and requires the same general treatment.'

"Lastly, this method of investigating the organic diseases of the alimentary canal, may tend materially to the improvement of pathological anatomy, by directing and fixing the attention of future inquirers upon the origin and progress of organic derangements; may serve to point out those general principles which should be pursued in the treatment; and may introduce a new and more effectual means of eradicating the disease, or of arresting its progress, which is peculiarly adapted to the nature of the case." p. 108—110.

Upon the whole, we certainly agree with Dr Monro, and are fully sensible of the great advantage to be derived from classing together diseases of similar structures, in whatever part of the canal they may happen to be situated; but we consider a view of the same diseases, according to the part of the canal affected, to be no less natural, and no less necessary. Diseases of the rectum form a group as natural as those of the villous coat, and are as distinct in their symptoms, effects, and mode of treatment from those of the gullet, as the diseases of the villous and peritoneal membrane from each other. A complete knowledge of the subject can only be acquired, by considering the various affections generally, according to their distribution in both arrangements; and, in proceeding to the detail of the different diseases, it would be of advantage to adhere rigidly to neither, but adopt sometimes the one, and sometimes the other.

The principle of arrangement adopted by Dr Monro is sanctioned by the example of Bichât, Pinel, and the later French nosologists, but is not borrowed from them. As, however, they have arrogated the merit of the discovery, it becomes us to strip them of their borrowed plumes. To give some idea of the importance attached by them to it, we translate a passage from Husson's Life of Bichât. "Our brother, Professor Pinel, had considered inflammations in a manner till then unknown to the authors of nosological systems. The observations of morbid phenomena had led him to class inflammations according to the characters of organic affections. He thought, that, as these affections were varied, the structure of membranous parts was not identical. Bichât confirmed, in his Dissertation on the Membranes, the views and observations of Professor Pinel.—And here we must admire the mutual support of anatomy and medicine: the one discovers, at the bed-side of the patient, what the other confirms by his examination of the body: the one, which is considered more conjectural, precedes, so to speak, the certainty which the other bestows upon this beautiful theory of inflammation. We must confess, that there is more merit in foreseeing, from the diversity of diseases, differences in organization, than there is difficulty in classing these affections after a perfect knowledge of the organs; and therefore, science owes more, in these circumstances, to the original observations of Pinel, than to the anatomical researches of Bichât."

Now the fact is, that Dr C. Smyth, in his excellent paper on the nosology of inflammations, published in 1790, in the second volume of the Medical Communications, completely and undeniably anticipated Pinel; and it is impossible to conceive that a professor of so much erudition, could be ignorant of an essay published in a collection of so great celebrity, more especially as it was analyzed in the periodical publications of the day in the most extensive circulation. Moreover, the principle, that the nature of the inflammation was determined by the structure of the part, was taught by John Hunter, in his lectures, as early as the year 1774; and, although these were not published till 1794, manuscript copies were in the hands of every pathologist. As Dr Smyth anticipated Pinel, so did John Hunter precede Bichât, who, on more occasions than this, lies under unacknowledged obligations to that great man; and the respective merit of our countrymen will not suffer by the insinuation common in the writings of the French physiologists, that the "great and philosophic views of Bordeu" furnished the first hints of the principle; for they are not to be traced in the doctrines of that ornament of the Montpelier school.

We shall not enter minutely into the detail or criticism of Dr Monro's arrangement. Its general plan is to class the organic diseases of the alimentary canal, as affecting the villous coat, the cellular coat, the muscular coats, the peritoneal coat, all the coats, and the mucous glands, and to consider each of these again as they occur in the gullet, stomach, or intestines. The diseases which affect these different structures, are, inflammation, ulceration, erosion, gangrene, adhesion, effusion of serum and lymph; thickening, induration, deposition of cartilage and formation of bone; tumors of various descriptions, strictures, ruptures, spasm, and palsy. Upon all of these much valuable information is contained in this volume, along with much irrelevant, though sometimes interesting matter. We cannot, however, consider the specific nature of the "milt-like tumor of the mucous membranes" as fully established; for, of the two cases which he gives of it, the second occurred in a girl only eleven years of age, was firm, and almost cartilaginous at its attachments, although, in its processes, as soft as brain; whereas, among the characters distinguishing it from fungus hæmatodes, which he considers the same as the anomalous tumor of his grandfather, Dr Monro describes this milt-like tumor as occurring only in advanced life, and being extremely soft and uniform in structure.

The next chapter is entitled "of obstruction originating from displacement of a portion of the alimentary canal;" and treats, in three sections, of intus-susceptio, procidentia ani, and ruptures.

The last of these subjects is treated of at very great length, as might naturally have been expected from one who had already published on crural hernia. It would far exceed the limits within which we must confine this article, even to enumerate the various and interesting matters contained in this section. It everywhere displays proofs of the zeal with which Dr Monro has incessantly studied the subject; and it is enriched with many valuable communications from his correspondents, among whom it would be unjust not to distinguish Mr Allan Burns of Glasgow.

Another chapter contains a very few observations on malconformation of the lower part of the alimentary canal; and the last, on intestinal worms, is rendered particularly valuable by the truly scientific description, by Dr Leach, of the genus Tænia, as infesting the human body.

From the sketch we have given of the contents of this volume, the reader will have an idea of the vast variety and importance of the subjects of which it treats, as well as of our author's general plan. To have attempted a detail or criticism of the arrangement of the subdivisions of the different heads, would have been endless; but we should have been wanting in our duty, if we were to conceal, that everywhere great want of method and of precision is apparent. This is the more to be regretted in a book which ought to have become a work of reference. Titles of chapters and sections, contents and indexes, may appear, to som e, matters of inferior importance; but we beg leave to refer those who think so, to the preface of Dr Monro's illustrious predecessor, Morgagni. In all these necessary appendages, the volume before us is lamentably deficient. In page 549, the third chapter is referred to: Now, in the contents, no division of the work into chapters and sections is alluded to; and, on turning over the leaves, we find, not one, but two, third chapters. In like manner, the fifth section of the first third chapter is entitled *of gangrene*, and comprehends, as titles of subdivisions—*symptoms—of the symptoms of hydrophobia, &c.*; but one would naturally imagine the first treated of *gangrene* of the villous coat of the gullet, while, in fact, it contains the symptoms of its *inflammation*, which was treated of in the second section. And the admirably described case of hydrophobia by Dr Rutherford, which is here inserted, and to which, as to many other important observations, no reference is inserted in the grossly defective table of contents, has not only no connexion whatever with gangrene, but did not present the slightest morbid appearance on dissection. The arrangement of the plates is equally confused; ten, twenty-one, seventeen, and twelve, follow in succession, and eleven is placed between nineteen and twenty. There is no list of them given, nor any directions to the binder how to place them.

Upon the whole, in estimating the value of the volume before us, the *matter* must be carefully distinguished from the *manner*. Its matter satisfactorily proves Dr Monro's zeal, both as an intelligent observer himself, and as indefatigable in exciting others to labour along with him in promoting his favourite science. Were this volume possessed of no other merit, we should consider ourselves as under very great obligations to Dr Monro for the many interesting cases communicated by his correspondents, which he has thus preserved. But Dr Monro has occupied himself too exclusively in amassing a store of facts; and does not seem to have been sufficiently aware, that the reputation of a work depends very much upon the manner in which it is edited. It is not enough, in constructing an edifice, that our plan be good, and that we spare no pains or expense in providing the best materials. They must be carefully prepared and reduced to proper shape. They must be nicely fitted and adapted to each other, and the whole accurately and harmoniously arranged, or the skill of the architect will be justly called in question. That it is the same with books, is so well understood by those most interested in their success, that professed editors are often employed, to digest and give form to the productions of valuable, but unskilful authors.

We have been led to these strictures, not only by a regard for truth, but from the hope that Dr Monro will profit by them; and we trust that we shall not be accused of want of candour, if we terminate our observations by the following well-written apology for the deficiencies of the work.

> "Of the defects, as a literary production, of this treatise, which I deliver to the public with the greatest diffidence, no one can be more deeply sensible than myself. I am aware of its imperfections in regard to matter, arrangement, and style; and if I had not presumed to indulge the hope, that it might be of some use to the profession, I should not have thought, for some years to come, of appearing before the tribunal of criticism, in the capacity of an author, being not unwilling to flatter myself, that if I had delayed publication for some time, the work might have been less liable to the severity of criticism.
>
> "But the following reasons have made me prefer an early to a more correct or finished publication.
>
> "If the facts and observations contained in the preceding pages shall be found, as I hope they may be, an addition and improvement to the healing art, or lead to such improvement, the sooner they are delivered to the public, the more likely are they to do good.
>
> "Another consideration, though more strictly personal to myself, will, I trust, be allowed to be a laudable one. As a Professor of this University, I am anxious to convince the public, and especially those friends and patrons who placed me in that honourable station, that I have not been inattentive to the obligations which it imposed on me; and that in this instance, as in many others, I have been ambitious of treading, though with unequal powers, in the footsteps of my father and grandfather, who, for many years, filled the chair I now hold, with credit to themselves, and advantage to their country." p. 566, 567.

PART III.

MEDICAL INTELLIGENCE.

Report of Diseases treated at the PUBLIC DISPENSARY, *(near Carey-Street,) London, from August 30th to November 30th* 1812.

ACUTE DISEASES.

	No. of Cases.		No. of Cases.
Tertiana	1	Rubeola	6
Febris	37	Variola	7
Otalgia	1	Scarlatina	5
Cynanche tonsillaris	4	Febris infantum	13
——— parotidæa	5	Cholera	1
——— aphthosa	5	Enteritis	3
Peripneumonia	10	Abortus	3
——— notha	3	Apoplexia	2
Catarrhus	60	Hydrocephalus	3
Carditis	1	Epistaxis	1
Pertussis	1	Rheumatismus acutus	15
Dysenteria	23	Arthritis rheumatica	4
Erysipelas faciei	1	Phlegmatia dolens	1

CHRONIC DISEASES.

	No. of Cases.		No. of Cases.
Hemicrania	1	Colica	1
Cephalæa	20	——— Pictonum	1
Vertigo	8	Constipatio	2
Ophthalmia tarsi	3	Diarrhœa	15
Cynanche chron.	4	Hæmorrhagia intestin.	1
Catarrhus chron.	47	Tænia	2
Asthma et Dyspnœa	5	Marasmus	10
Hæmoptysis	16	Hysteralgia	1
Phthisis	23	Menorrhagia	6
Palpitatio	4	Amenorrhœa	4
Dyspepsia	22	Dysmenorrhœa	1
Gastrodynia	16	Leucorrhœa	13
Pyrosis	7	Chlorosis	3
Hepatalgia	4	Hysteria	5
Icterus	5	Chorea	1
Enterodynia	11	Epilepsia	1

CHRONIC DISEASES continued.

	No. of Cases.		No. of Cases.
Asthenia	12	Lichen	2
Hypochondriasis	1	Prurigo	3
Mania	1	Lepra	3
Paralysis et hemiplegia	3	Urticaria	5
——— saturnina	2	Erythema	3
Dysuria	2	Eczema	2
Enuresis	1	Porrigo	10
Nephralgia	14	Impetigo	2
Anasarca	2	Ecthyma	8
Hydrothorax	3	Scabies	2
Hydrops tot. corporis	1	Rupia	5
Rheumatismus chron.	18	Herpes labialis	2
Lumbago et Sciatica	5	Sycosis	1
Scrofula	2		

The greater part of the month of September was dry and warm, affording the only instance of settled weather, for a period of three weeks, that occurred through the summer. Soon after the equinox, however, the weather became turbulent and wet; and the rains continued frequent throughout October, being lighter, and accompanied with a thick foggy atmosphere towards the conclusion of the month. November commenced with a degree of cold somewhat unusual at that season, and several days of severe frost ensued, during which the atmosphere was commonly loaded with fog, especially in the mornings and evenings. The last ten days of the month have been mild, but damp, with occasional drizzling rains.

The seasons, not having been strongly characterized by their usual features, have not produced much peculiarity of disease. But one case of cholera has occurred; and that in the month of November, and therefore independently of the usual cause. More than half of the cases of gastrodynia, enterodynia, dysentery, and headach, appeared, however, in the month of September, as well as a great majority of the cases set down under the head of fever. These slight fevers, which are of short duration, and unaccompanied by any severe or alarming symptom, are obviously of gastric origin: they require no other treatment than an antiphlogistic regimen, with moderate purgatives, and the constitution speedily regains its strength, when the order of the gastric system is restored. Only one case of fever occurred, which assumed any appearance of a typhoid tendency, in a man who had been for some time struggling against poverty, and destitute of sufficient nutriment: in this instance a little more cordial treatment was deemed requisite, and was speedily successful.

An observation of some practical importance in the management of fever, has been suggested to me during a comparative view of this disease, under the different circumstances of the patients whom it affects, which may perhaps serve, in some measure, to explain the contradictory statements of practitioners, with respect to the effects of the cordial treatment of low fever. Some of them have extolled the success of cinchona, and the diffusible stimulants; while others have contended for the superior efficacy of a strict antiphlogistic plan, with purgatives, and have averred that the opposite system is not merely ineffectual, but absolutely deleterious. From observing the phenomena of fever in the close and heated apartments of private dwellings, and in the cool and airy wards of the House of Recovery, I am disposed to believe, that the state of the body is so materially modified by these external circumstances, as greatly to change the influence of the remedies in question: so that both these classes of practitioners have had some grounds for their respective opinions. The fact appears to be, that the constitution, under a state of acute fever, is elevated to a certain degree of excitement, by the salutary stimulus of pure cool air; and, in that condition, is easily acted upon by moderate internal stimulants: insomuch, that the slightest cordial, whether in diet or medicine, readily increases the febrile condition, whilst the strictest adherence to the antiphlogistic plan is necessary to reduce its violence, and to prevent the occurrence of untoward symptoms. But, on the contrary, when the patient is depressed by the influence of a close and stifling atmosphere, and melting under a load of bedclothes, imbued with his excretory fluids, he is not only incapable of being roused to extraordinary excitement by moderate stimulants, but absolutely requires them to prevent him from sinking under the depression, in which these surrounding circumstances plunge him; and it is extraordinary to what an extreme degree of lowness the operation of the mildest laxative, or any other debilitating cause, reduces him. It has frequently occurred to me to notice the rapid change in the degree of constitutional excitement, produced by the removal of a patient in fever from a close apartment to one that was clean and airy. Whilst in the former situation, he has appeared to be sinking under the worst symptoms, to which the epithet of *putrid* has been appropriated, and was only refreshed by wine and cordials: But, after passing a night in the new situation, these putrid symptoms had not only disappeared; not only had delirium gone, and the tongue lost its black hue—but it was now no longer practicable to administer stimulants; for they accelerated the pulse, flushed the countenance, reddened the eye, and parched and incrusted the tongue. Whereas, under the use of light liquid nutriment, with the antiphlogistic and laxative system of medicine, the patient gradually recovered. The history of the *miliary* fever would afford an excellent illustration of this view of the subject; but I have not room at present to pursue it. Such was the constitutional depression, which accompanied this artificial product of the stifling practice, that actual syncope was not unfrequently the consequence of one or two evacuations of the bowels, occasioned by the action of a glyster, or even by the natural efforts of the intestines. * We cannot wonder, therefore, that great prejudices should arise against the use of purgatives in the treatment of fevers, while such a system was in vogue; and that many practitioners, not being aware of the circumstances under which the prejudicial effects of these medicines were incurred, should be slow to admit the evidence in favour of their utility.

From the small number of cases of small-pox contained in the preceding list, no opinion is to be formed respecting the actual prevalence of that pestilential disease in London. It is only a few of the worst cases for which the assistance of a public charity is claimed; indeed the malady seems to be, in many instances, quietly submitted to, as an uncontrollable infliction, among the lower classes of the people; who, having been terrified by the actual horrors of small-pox, on the one hand, and by the fictitious alarms of the antivaccinists, on the other, seem to have lost all confidence in either preservative; and, like the poor animal that starved between two sources of subsistence, to have submitted their offspring to perish, without an effort of any kind for their security. The lamentable consequence of this is, that, within the three months comprehended by this report, the bills of mortality, which do not include the extensive parishes of Marybone and St Pancras, have assured us of no less than *five hundred and twenty-seven* deaths occasioned by small-pox. Yet amidst all this dreadful mortality, the opposers of vaccination have the assurance and the folly to exclaim against the "failures" of vaccination; which, though it have sometimes failed to prevent a subsequent small-pox, has never failed to prevent a *fatal* small-pox;—has never *failed*, in these cases, to *save life!* In one small court, in Shoe Lane, *seventeen* individuals have lately been cut off by this variolous plague.

The case of chorea occurred in a boy, about 13 years old, and was the result of a blow on the head, received in a fall. The irregular motions of the muscles were chiefly confined to the right side, and were very considerable: for three weeks back, the boy has been unable to leave his bed; has been exceedingly peevish and irritable; often screaming and distorting his features, as if from sudden pain, and seldom answering questions put to him, or speaking of his own accord. Bleeding from the temporal artery, blisters and purgatives, have not afforded any material relief; but he seems to be somewhat improved, within these three days, by the use of a seton in the neck.

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* See White on the Management of Lying-in Women.

The instances of aphthous sore throat have been rather frequent during the wet weather. In addition to those mentioned in the preceding list, it occurred under my observation among the children of two private families about the same time, affecting two or three of them in quick succession. There is an erythematous redness, inclining to purple, extending over the tonsils and velum pendulum, upon which the aphthous specks appear, in small numbers, and distinct. These remain five or six days, or more, during which period there is a slight feverish state of the body, with considerable languor and debility, and a sensation of soreness in the throat, increased by deglutition. The tongue partakes of the purplish redness, especially round the edges and at the point, on which the papillæ are somewhat elongated, and protrude their red points above the fur, somewhat in a similar manner as in scarlet fever. Medicine does not seem to possess much power in shortening the duration of this sore throat: but in its decline, the cinchona, with mineral acids, appears to accelerate the return of the strength. The aphthous specks have not, in any instance that has fallen under my observation, terminated in actual ulceration.

Aphthæ, in grown children or adults, have been deemed one of the products of moist autumnal seasons; * and this variety of sore throat has been described by Dr Willan † as very frequent in some particular seasons of this character: but I have seldom met with it to the extent described by him.

T. Bateman.

Bedford Row, Nov. 30th, 1812.

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* See Van Swieten, Com. ad Aph. 982.—Arnemann, Com. de Aphthis.

† Reports on Dis. of London, p. 111.

Report of the National Vaccine Establishment: Dated 9th March 1812. Ordered, by the House of Commons, to be printed, 29th July 1812.

To the Right Honourable RICHARD RYDER, Principal Secretary of State, Home Department, &c. &c. &c.

National Vaccine Establishment, Leicester-Square, March 9th, 1812.

SIR,—The Board of the National Vaccine Eſtabliſhment have the honour of reporting to you, that, during the year 1811, the Surgeons appointed by their authority to the nine Stations in London, have vaccinated 3148 perſons, and have diſtributed 23,794 charges of Vaccine Lymph to the Public. The number vaccinated this year rather exceeds that of the year 1810; and the demand for lymph has been often ſo great, that it could not be immediately ſupplied.

They have great ſatisfaction in ſtating, that ſince the commencement of this Eſtabliſhment, not a ſingle inſtance of the acceſſion of ſmall-pox after vaccination has occurred to any of the vaccinating Surgeons of the nine ſtations.

The Board report, that they have been lately furniſhed with many ſatisfactory official documents from the Naval and Military Departments of Government, reſpecting the progreſs of vaccination, and have likewiſe obtained ſome other authentic papers on the ſubject, containing much important information. They think it expedient to lay before you a ſummary of their contents.

It appears, that in conſequence of an order from the Lords Commiſſioners of the Admiralty, vaccination has been practiſed in the Navy to a great extent; and, although it has not been univerſally adopted, the mortality from the ſmall-pox, among ſeamen, is already greatly diminiſhed.

In the Army, the practice of vaccination has been long eſtabliſhed, by an order from the Commander-in-Chief, and its effects have been decidedly beneficial; for almoſt the only perſons among the troops who have lately been affected with ſmall-pox, have been, either recruits who had received the infection previous to their enliſtment, or ſoldiers who had not been vaccinated, on the ſuppoſition of their having had the variolous diſeaſe. Thus, with a few exceptions, a diſorder formerly ſo fatal to the troops, is now conſidered as nearly extinguiſhed in the Army.

By information tranſmitted to the Board from their numerous Correſpondents in all parts of the country, it appears that vaccination is almoſt everywhere gaining ground, throughout the Britiſh dominions, though its progreſs is very different in different places; and it is found that the number of deaths from the ſmall-pox is uniformly decreaſing, in proportion as vaccination becomes more general, and the inoculation of the ſmall-pox declines.

The diſappearance of the ſmall-pox from the Iſland of Ceylon, was noticed in the Report of laſt year; and the Board has now the pleaſure of ſtating, from ſources of authentic and ſatisfactory information, that, in conſequence of vaccination, this dreadful diſeaſe has in no inſtance lately occurred in the Island of Anglesey, in the populous city of Newcaſtle-upon-Tyne, in the town of Petworth, or in the adjoining diſtrict.

Through the different counties of England, the practice of vaccination is becoming general, and the ſmall-pox is gradually declining; and even in London, where the oppoſition to the new inoculation has been moſt violent, it is prevailing; and its ſalutary effects are becoming daily more evident. At preſent, by the beſt eſtimate we are able to make, it appears that nearly two-thirds of the children annually born in the metropolis, are vaccinated either by charitable inſtitutions, or private practitioners; and that the number of deaths by ſmall-pox has proportionably decreaſed. Previous to the diſcovery of vaccination, the average number of deaths by ſmall-pox within the bills of mortality, was 2000 annually; whereas in the laſt year, only 751 perſons have died of that diſeaſe, although the increaſe of population within the laſt ten years has been 133,139. The increaſe of population throughout Great Britain, in the ſame period of time, has been 1,609,000; and to theſe augmentations the practice of vaccination has probably much contributed.

The reports from the Cow-Pock Inſtitution in Dublin are of the moſt favourable nature, and furniſh ſufficient reaſon to believe, that ſince the introduction of the vaccine preventive, the mortality from ſmall-pox has conſiderably declined in that city. The correſpondence of the Inſtitution affords ſatisfactory evidence of the progreſſive increaſe of vaccination throughout Ireland. In moſt of the principal towns of that kingdom, the poor have the advantage of gratuitous inoculation with cow-pox, either at the hoſpitals, or at the houſes of the phyſicians; and it is ſtated, that among the higher ranks vaccination is univerſally adopted.

The accounts from Scotland, particularly thoſe from the Faculty at Glaſgow, which have been tranſmitted to the Board, furniſh evidence of the general and rapid increaſe of vaccination in the northern part of the iſland; and give the moſt ſatisfactory proofs of the ſucceſs and efficacy of the practice.

Notwithſtanding the incontrovertible evidence of the very great advantages of vaccination, it is much to be lamented that there are ſtill ſome medical practitioners, though the number of them is comparatively ſmall, who obſtinately perſiſt in diſſeminating, by inoculation, the contagion of the ſmall-pox, and who ſtrenuouſly encourage and ſupport, eſpecially among the lower orders of the people, the prejudices againſt the new practice. Rumours are induſtriouſly ſpread abroad, of deforming and loathſome diſeaſes produced by this practice; and numerous miſtatements of caſes are publiſhed, of the occurrence of ſmall-pox after vaccination. That, in ſome inſtances, the ſmall-pox has affected perſons who have been moſt carefully vaccinated, is ſufficiently eſtabliſhed; nor ought we to be ſurpriſed at this, when we conſider that the inoculation for the ſmall-pox ſometimes fails, and that ſeveral caſes may be produced, in which perſons have been affected with the natural diſeaſe more than once in the courſe of life. The number of inſtances of ſmall-pox after vaccination, however, is very ſmall; and we may fairly preſume, that in proportion as improvements are made in the practice, ſuch occurrences will be ſtill more rare.

The Board have infinite ſatisfaction in ſtating the two following important and deciſive facts in proof of the efficacy and ſafety of vaccination, viz. that in the caſes which have come to their knowledge, the ſmall-pox after vaccination, with a very few exceptions, has been a mild diſeaſe:

and that, out of the many hundred thouſand perſons vaccinated, not a ſingle well-authenticated inſtance has been communicated to them, of the occurrence of a fatal ſmall-pox after vaccination.

They cannot conclude their Report, without adverting to the miſchiefs which are daily ariſing from the diffuſion of the fatal contagion of ſmall-pox in the community, in conſequence of variolous inoculation among the lower claſſes of the people, which conſtantly keeps up the contagion, and, where it ſaves a ſingle life, expoſes numbers to a moſt dangerous diſeaſe. It is greatly to be wiſhed that this evil could be checked, by ſuch meaſures as Government, in its wiſdom, might judge proper to frame, in order to prevent the ſpreading of the ſmall-pox, and thus keeping up a continual ſource of infection in the heart of the metropolis.

The conſtant renewal of the contagion of ſmall-pox in this capital, which they ſo deeply lament, is ſtrikingly contraſted with the advantages enjoyed by ſeveral of the other capitals of Europe, in conſequence of the univerſal adoption of vaccination by medical practitioners, ſeconded by the authority of government. The cities of Vienna and Milan, in which the mortality from ſmall-pox was formerly more conſiderable in proportion to their population than in London, have been for ſome time freed altogether from this deſtructive peſt; the firſt for five, and the latter for eight years, according to the ſtatement of Drs De Carrio and Sacco: And in the city of Geneva, the ſmall-pox has been nearly extirpated. In Switzerland in general, but more particularly in Geneva, the extenſion of the bleſſings connected with vaccination has, in a great degree, depended on the warm and active cooperation of the clergy, who were aſſiduous in recommending the practice to their pariſhioners from the pulpit, as well as promoting it by every other exertion in their power. Impreſſed with the ſtrongeſt conviction of the great advantage which vaccination would derive from a ſimilar cooperation in this country, the Board formerly conſidered it as a part of their duty to addreſs the Biſhops, for the purpoſe of ſoliciting their aſſiſtance in checking the ravages of the ſmall-pox, by rendering the benefits of the vaccine inoculation more extenſively known.

The Board has great pleaſure in ſtating, that the money granted by Parliament during the laſt ſeſſion, has been ſufficient to defray the expenſes of the year 1811; and they are of opinion, that the ſame ſum will be adequate to the expenditure of the current year.

By order of the Board,
James Hervey, Regiſter. } Fr. Milman, Preſident.

Extract of a Letter from P. Johnson, Surgeon, Royal Navy.

Gentlemen,—In your laſt Number of the Edinburgh Medical and Surgical Journal, there are eleven queſtions propoſed reſpecting the average nutriment of different proviſions. In anſwer to

No. 1. A pound of wheaten bread is equal to half a pound of beef, mutton, veal. Pork is more nutritive than either of the three laſt.

No. 2. One pound of meat is fully equal to two pounds of bread.

No. 3. Two pounds of freſh milk are not equal to one pound of bread.

No. 4. Good cheeſe is equal to butcher-meat, weight for weight.

No. 5. Good butter is not twice as nutritive as meat.

No. 6. Cannot anſwer from experience.

No. 7. One pound of good ale is not equal to half a pound of bread.

No. 8. Wheat is twice as nutritive in bread as barley is.

No. 9. One pound of wheaten bread is equal to one pound and half of oaten bread.

No. 10. Peas or bean meal is only half as nutritive as wheat, if made into bread; peas or bean meal, if made into ſoup, is more nutritious than if made into bread.

No. 11. Three and half pounds of potatoes are equal to one pound of wheaten bread.——*Deptford, December 7th,* 1812.

Extract of a Letter from John Urquhart, Surgeon, and M. R. M. S. Edinburgh, *containing a Case of Phthisis Pulmonalis cured at Sea, under a regulated Temperature.*

Mr E—— C——, purſer of his Majeſty's ſhip Briſk, was attacked, about October 1809, with an inflammatory affection of his lungs; and, ſuppoſing it to be a common cold, he neglected having recourſe to proper remedies, until ſymptoms of incipient phthiſis had made their appearance. As his complaint appeared to increaſe with the approach of winter, he went on ſhore in November, and did not join his ſhip until July 1810, when I firſt ſaw him.

At this time it appeared that the ſymptoms of pulmonary conſumption had made rapid advances; but, ſince the commencement of the ſummer, he felt the ſymptoms of his complaint leſs urgent, though ſtill the cough, difficulty of breathing, pain of breaſt, with copious fetid expectoration and profuſe nocturnal perſpirations, were well marked, and general emaciation had ſo altered his appearance, that on a curſory view he was ſcarcely recognized by his meſsmates. He continued on board during the ſummer, and finding no aggravation of the phthiſical ſymptoms, and his duty not requiring him to be expoſed to the weather, he put on a determination to remain on board during the winter.

From September 1810, until April 1811, the Briſk has been employed chiefly cruiſing in the Bay of Biſcay, where the common atmoſpheric temperature was frequently as low as 35° Fahren. but was regulated in my patient's cabin between 60° and 68°.

During this time, the phthiſical ſymptoms have conſiderably diminiſhed. He is now only ſubject to ſevere cough, when he expoſes himſelf to a cool atmoſphere; which he avoids carefully, excepting in fine weather, and about noon, when he has, for ſome weeks paſt, been able to walk on deck for half an hour at a time, without ſuch aggravation of the phthiſical ſymptoms as formerly. His general appearance is much improved. The clavicles, acromion, and ſpinous proceſses of the ſcapulæ, and external trochanters of the thighs, appear much leſs prominent than formerly. The expectoration is diminiſhed, and, for this month paſt, has loſt its fetor. The nocturnal perſpirations return at times, but not ſo profuſe.

He has uſed ſeveral medicines, uſually preſcribed in ſuch caſes; but, from his own feelings, he conſiders the palliation of the phthiſical ſymptoms to have depended chiefly on the regulated temperature.

During the ſummer of 1811, his health continued to improve, but on the approach of winter, he had a return of the dyspnœa, from imprudently expoſing himſelf. By carefully attending to the ſyſtem adopted the former winter, an increaſe of the phthiſical affection was prevented. Since laſt May, he has been free from all the phthiſical ſymptoms, and has of late been frequently expoſed to night air, and a moiſt atmoſphere, without a relapſe.

H. M. ship Brisk, Irish Station, Dec. 3d, 1812.

On Wedneſday, October 7th, 1812, the Society for Relief of Widows and Orphans of Medical Men in London and its vicinity, held their half-yearly general court, at the uſual place of meeting, (the Gray's Inn Coffeehouſe, Holborn), when the annual election of officers and directors took place.

This Society was inſtituted in the year 1788. Its capital is now 19,200l. three per cent. conſolidated bank annuities, and 200l. navy five per cents; out of the intereſt of which, down to the 16th of September in the preſent year, 1812, the ſum of 3,537l. 13s. has been diſtributed among the widows and orphans of deceaſed medical men, members of this Society, many of whoſe families have been left without any proviſion whatever.

Dr CLOUGH, Berner's Street, will commence his enſuing courſe of Lectures on the Science and Practice of Midwifery, including the diſeaſes of women and infants, as connected therewith, on Monday morning the 4th of January, at half-paſt 10, and at 7 in the evening. Students, when properly qualified, will be amply provided with caſes to attend in rotation, which are governed by the number admitted at the Inſtitution, and their views greatly forwarded by weekly examinations of the preceding lectures. A proſpectus may be had as above, and of all the Medical Bookſellers.

Lectures on the Anatomy, Phyſiology, and Pathology, of the Eye and Ear, by Mr STEVENSON, Oculiſt and Auriſt to Her Royal Highneſs the Princeſs of Wales, Member of the Royal College of Surgeons, and Fellow of the Medical Society of London, &c.

Terms of attendance,—Three Guineas each courſe; only one of which will be delivered during the ſeaſon. The Introductory Lecture, to which all profeſſional Gentlemen and Students may have free admiſſion, will be delivered, January 26th, at 8 o'clock in the evening. Further particulars may be obtained, by applying to Mr Stevenſon, 105, Great Ruſſel-Street, Bloomſbury-Square.

Mr J. H. WISHART is preparing for the preſs, a tranſlation of Scarpa's Treatiſe on Hernia from the original Italian.

ERRATA. Vol. VII. Page 418, line 27, *for* day-light *read* moon-light. P. 418, line 28, *dele* the moon. P. 149, line 29, *for* propinque *read* propinqui.

Communications have been received from Chirurgus, Mr Salter, Mr Fogo, Dr Rodman, Mr Pring, Anonymous from Paisley, R. L. Lazaretto, Mr Stevenson, Dr Barlow.——Reviews of Pinel's Nosographie Philosophique, Scarpa on Hernia, and some other foreign Publications, will be inserted in our next Number.

THE

EDINBURGH
MEDICAL AND SURGICAL JOURNAL.

1. APRIL 1813.

PART I.

ORIGINAL COMMUNICATIONS.

I.

Singular Case of Lithotomy, performed on a Man who had attempted to saw and break down the Stone in the Bladder. By JOHN RODMAN, M. D. Paisley. *With notes of General Martin's Case*, communicated by Dr MONRO, Sen.

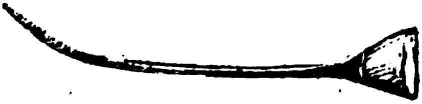
MARCH 3d, 1804.—Begin to attend E. M., a bachelor, whose mental disposition is serious, and temper irritable. Though he subsists on small quantities of meagre diet, his body, which is low in stature, is very corpulent. He has suffered greatly from gravel pains since his earliest recollection; and, in the course of the last twenty years, various quantities of sand and small concretions have been expelled along with the urine. Last year the urethra was cut open at an inch and half from the extremity of the penis, to extract a worm-like calculus of an inch in length, and, since that period, the sides of the urethra anterior to the opening have coalesced, leaving only a little hole, at one angle of the wound, as a common outlet for the urine. This aperture is now smaller than it was some time ago, and the urine passes through it with great difficulty; but besides, the urethra to the membraneous portion is so exceedingly contracted, as scarcely to admit the entry of a very slender probe. This morbid constriction of the urethra along the corpora cavernosa, seems to have been occasioned by the frequent irritation caused by bougies, which he was not sufficiently careful to preserve in a state of proper polish; nor does it appear that he attended as he ought to the mode of introducing them. The internal coats of the urinary canal are thickened, and almost completely callous. When particles of sand collect in the membraneous portion of the urethra, the only relief he obtains is from endeavouring to introduce a piece of catgut, or a small wire-like catheter adapted to the passage, which, by dislodging these particles, permits a dribbling discharge of urine. The greater part of his time has been nearly occupied, for the last eight months, in painful exertions of this kind, because very few particles advance farther forward, for some time, than the arch of the pubes; and tormenting calls to urine render him often almost desperate. Having made several ineffective attempts to subdue the disorder, I yielded to his urgent request, and performed the operation of lithotomy on the 16th of the same month, which was accomplished in the following manner:

A staff, about the thickness of an ordinary stocking-wire, was introduced by the hole in the urethra, which has been mentioned, and got forward to nigh the neck of the bladder, where its farther passage was impeded, so that the usual incision was necessarily made with the staff in this position. By means of a probe, calcareous concretions were now felt in close contact with the prostate gland, within a sac formed from morbid distention of the urethra; and, more internally, the bladder was discovered to contain numbers of stony formations. A female staff was next inserted in place of the probe, upon which the gorget being introduced, the neck of the bladder was thus divided. Fourteen distinct nuclei were then extracted, and stony fragments of various sizes. The largest were within the bladder, and others were included in the sac described, or burrowed in the soft parts around the prostate gland. Having secured some arteries, and washed the bladder with tepid water, to remove any sand that might there be left, he was dressed and laid in bed.

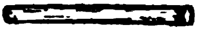
I pass over the diary of his case, and merely mention, that he was walking about in seven weeks after the operation. The sensibility of his constitution was singularly acute, and the functions of the stomach and intestines were much disordered; consequently, many severe relapses were overcome during the progress of his recovery.

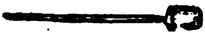
The deviation from what is usual in the steps of operating was not from choice, it arose from necessity. The local malformation prevented the use of instruments in the ordinary way; they were therefore procured and used according to the plans determined upon for his relief and safety. The calculi were found to be phosphate of lime, mixed with viscous matter, and they sent forth a fetor like putrid animal substances after they began to dry, their corpuscular cohesion being very imperfect. Some plans were adopted with a view to procure an easy passage for the urine through all the urethra; but, at last, the urine forced its way by the old wound below the extremity of the penis.

In the course of ten months, large particles of sand began again to appear, and to obstruct the discharge of urine; however, the occasional obstruction was but momentary, till July 1805, when I cut out another calculus, formed in the perinæum, as large as a sparrow's egg. By this time the urethra had become partially so contracted, as to intercept very small earthy particles at one part or another, and occasion continual distress; I therefore determined upon the following scheme: A silver tube was got, three inches long, with a broad circular head. This tube being introduced at the perinæum, and supported easily there with fillets, carried off the urine with comparative comfort, and conveyed away much sand, observed upon the connecting clothes. But, in three months, new troubles arose. He began to experience uncommonly painful feelings at the neck of the bladder, where the formation of another concretion was discovered; and it being thought practicable to reduce its size, while its growth would be prevented, the following is the figure of an instrument used for that purpose:



An inch and half of the curved extremity was tempered, and formed into a file on the concave surface. It was occasionally passed through the silver tube, and being cautiously made to embrace the calculus at the filing part, a very little motion fretted off sandy particles, almost without pain. In a few weeks the shape of the calculus became so much altered, that the application of this instrument seemed less effectual in the object of its use, and a small tube and borer were procured, which the figures below resemble.





The

inches long, shaped like a common sound, $\frac{3}{40}$ of an inch in diameter, till it comes within $\frac{3}{4}$ inch of the point, where it measures $\frac{1}{10}$ in diameter, and at this place it is made rough like a file on the convex part, and both sides; the concave part is smooth. Dr Monro thinks the file was applied to such calculi only as had got from the great cavity of the bladder into its neck, or beginning of the urethra, and also considers it even doubtful, whether the shell-like portions of calculus discharged, were broken off by the file from calculi in the urethra, or that a small calculus within the bladder had fallen to pieces, of which several instances had occurred to him.

II.

Observations on the different Hypotheses published to account for the Effects ascribed to the Wind of a Ball.

On the appearance of Mr Ellis's communication in your Journal for the month of January, I, like some of your readers, had been led to doubt the accuracy of his observations, and had written some remarks upon them for my own amusement and satisfaction, without any farther design. Since that time Dr Spence and Mr Forbes have taken up the subject, and, while they have both endeavoured to controvert the opinions of Mr Ellis, they do not appear to me to have substituted in their place any thing at all satisfactory. I shall transcribe from my own common-place book a part of what I had then written, and shall make one single remark upon either of these gentlemen's communications.

In the number of the Edinburgh Medical and Surgical Journal for January 1812, there is a communication by Mr Ellis on "Accidents," said to have occurred by what is termed "the Wind of a Ball." From the ingenious and truly philosophic spirit of the author, I should have been led to expect something more satisfactory, upon a subject which I thought had almost ceased to attract the attention of mankind, as it could only be received as the offspring of ignorance and superstition. It is indeed true, that the opinions of men in every situation of life are to be respected, and the more universally they are spread, though not on this account alone entitled to any greater degree of credit, yet the foundations on which they rest are then to be examined with greater caution. Still the most natural and plainest reasons which can be given for their existence, ought always to be adopted. It is because Mr Ellis appears to me to have deviated from this obvious principle, that I now put down these remarks on his observations.

It is unnecessary to remind a philosopher of Mr Ellis's sagacity and penetration, of the attachment all men have to a belief in the marvellous, but for its present connection with a class of individuals who surpass all others in credulity,—I mean seamen. Fearless as they are of death, and desperate in adventure, the boldest of them are slaves to the most ridiculous opinions, and wildest superstitions. It was probably among such men that this opinion of the fatal effects of the "wind of a shot" first originated, as it appears, by the accounts of Dr Blane and Mr Ellis, that among them it chiefly maintains its ground. The latter gentleman has indeed given a reason for this; but it is remarkable that, among the number of cases which he has been at pains to select, it does not at all appear that he is supported in that conclusion.

"A part," says Dr Blane, "is sometimes severely hurt, and even life destroyed, without any visible external injury, or breach of parts, or any appearance of the body from whence the injury proceeded." That such occurrences do happen in the heat of an engagement, it would be folly to doubt: the authority of Dr Blane of itself is sufficient for the establishment of the fact. But how far the opinions and judgments of medical men have been influenced, in their decisions on this subject, by common and vulgar prejudices, is certainly a fair object of inquiry. That these wounds and deaths arise from the cause to which they have been ascribed, "the wind of a ball," is a very different matter.

Beforehand we should be ready to suppose, that, in situations similar to those in which men are placed during engagements, when the mind is agitated by a thousand contending emotions, and frequently roused even to frenzy, sudden deaths would often occur independently of any external injury. That such agitations of mind do cause death, we know to a certainty. In a paroxysm of passion, a person previously disposed to apoplexy has suddenly expired. Here no external marks of injury can be perceived; and should this have happened on board a ship during an engagement, (a situation the most likely of all others for its occurrence) it is more than probable it would have been ascribed to the "wind of a shot." Once allow an opinion of this kind to find its way, and it will account for a multitude of incidents which might be easily explained upon common and ordinary principles. Men overlook these, and every rational mode of explaining events, when their passions are agitated and their alarms excited.

haps explain the apparent fact of the more frequent occurrence of such accidents in the East and West Indies than in Europe." Without calling in question the truth of the more frequent occurrence of such deaths in foreign countries, or rather taking it for granted, according to Mr Ellis's statement, that they do oftener happen during land and sea engagements in these distant and inhospitable climates, a more easy explanation may be given than that afforded by this gentleman. In these regions of disease and death, where the European constitution is much enfeebled, the sick-list in every vessel and regiment is greatly increased; the powers of life are here more easily exhausted and any powerful bodily or mental exertion soon terminates the scene.

There is only one additional consideration, which cannot fail to strike every person who reflects for a moment on this subject. Did such terrible accidents arise from any of the causes to which Mr Ellis has ascribed them, the effect of every wound from a cannon-shot would be more than doubly disastrous. If a ball, in passing by the stomach, may extinguish life, or, near the eye, destroy the powers of vision, every shot that struck any individual, must not only produce all the fatal effects of mechanical violence, but the more direful consequences of accumulated electricity, or some equally powerful or more destructive matter. It is impossible, in these circumstances, to believe that such things as wounds could almost ever happen without proving instantly fatal. Mechanical violence, however, is sufficient to account for all the dreadful consequences that have occurred.

The difficulty of accounting for these accidents upon any known and established principles in chemistry or natural philosophy, led me at first sight to doubt the views of Mr Ellis, and the accuracy of his observations; and, after endeavouring to call back to my mind the opinion of Mr Hunter, I could not help suspecting the truth of the whole. I have not followed Mr Ellis accurately throughout, nor endeavoured to answer his particular cases; and have only stated a general opinion in opposition to his hypothesis. At present it would be unnecessary to send you any thing I have written upon the merits of the different explanations attempted to be given of this matter by Dr Blane and Mr Ellis;—they are equally liable to objections. That of this latter gentleman is distinguished, like every thing coming from his pen, by its ingenuity. All the circumstances mentioned by him with regard to deaths occasioned by electricity, may be correct, but, if the explanation we have attempted to give be correct, they make nothing for his subject.

The idea of Dr Spence, that light substances, driven with immense velocity, may produce such fatal effects as those ascribed to the "wind of a ball," is sufficiently refuted by Mr Forbes. In fact they must, in consequence of this accumulated velocity, accomplish all the effects of mechanical violence to operate in the way the Doctor imagines. The ingenious solution of Mr Forbes is liable to the same objection as that of Mr Ellis. There is in it nothing of experiment, and all that we have said is equally applicable to his hypothesis. We cannot conclude these remarks better than by a quotation from the first volume of Dr Rush's Medical Inquiries. He is talking of one of those engagements which decided the fate of America. "The many instances which appeared after this memorable battle, of soldiers who were found among the slain without any marks of wounds, or violence upon their bodies, were probably occasioned by the heat excited in the body by the emotions of the mind being added to that of the atmosphere." Medical Inquiries, Vol. I. p. 218. Phil.

Paisley, 2d September 1812.

III.

Observations on the Fever prevalent in the Mediterranean, as it occurred on board one of his Majesty's line-of-battle ships on that station.

The cold stage was seldom of long duration; indeed, when the patient came to the sick bay, it had generally gone off, and was not noticed by him, unless particularly questioned about it. He then complained of much prostration of strength, with violent headache, or severe pain at the scrobiculus cordis, and very commonly of pain in some part of the thorax, sometimes attended with dispnœa, but seldom with any cough.

Soon after the first attack, the pulse became full and strong, or hard and wiry; the heat rose considerably above the natural standard; the face became flushed; the tongue dry, and rough to the touch; but the thirst was never remarkable, nor, in the greater number of cases that occurred with us, was there any considerable irritability of stomach. The bowels were generally constipated.

I am unable to state what the natural progress of the disorder would have been, for, in all the cases that occurred, (nearly 100) venesection was resorted to. There were three fatal cases, in one of which symptoms of gastritis were strongly marked; in the other two there was great determination to the brain.

Blood-letting was the remedy principally relied on, and the extent to which it was carried was regulated by the patient's feelings, viz. either until a remission of pain or incipient deliquium took place. Before this was effected, 50 or 60 ounces were frequently abstracted by a large orifice, and, if the pain recurred, I did not hesitate to repeat the evacuation to the extent of 20 or 30 ounces more, within four-and-twenty hours from the first attack; at least this was the practice I latterly followed, and I found it successful. When thus freely employed on the first day, there was seldom occasion to have recourse to venesection beyond a third time.

The three fatal cases alluded to above, were the three first that came under my care, and although, in compliance with the advice of the then physician to the fleet, I had recourse to blood-letting, yet, not being thoroughly aware of the nature of the epidemic, I have reason to regret that I did not, early enough, carry that powerful remedy to the extent that I afterwards found I might do with advantage and safety. Indeed, if six-and-thirty hours are allowed to elapse without due evacuations, the most favourable time is gone, the inflammatory action much increased, and determination to some of the viscera already begun;—blood-letting becomes more than ever necessary, but the patient is less able to bear it.

The rapidity with which the patient recovered his strength, on the removal of the febrile action, notwithstanding these large evacuations, was, for a long time, a matter of astonishment to me; and it became an object of importance to restrain the convalescents for some days, in their diet and exercise, to obviate the danger of a relapse, as several, by returning too soon to an animal diet, and their accustomed employments, were attacked again with fever, and their recovery rendered tedious.

In addition to venesection, a moderate purging was kept up by calomel, conjoined with antimony, and assisted by small doses of the saline purgatives, largely diluted, having found that in this way they sat well on the stomach.

In three cases, where there was no evident affection of the thorax or abdomen, and where the heat was unusually great, the cold affusion was employed. In all the three it procured great temporary relief; but in one, the disease terminated by an extensive abscess, situated over the gluteus maximus, and the other two were attacked, on the succeeding day, by severe pains in the thorax, which were relieved by the liberal use of the lancet.

There occurred also six or seven cases, apparently slight, and in which, consequently, evacuations were more sparingly employed, but they eventually proved the most troublesome, as the fever terminated in, or was succeeded by, disease of the liver or spleen. Four of these were sent to the hospital, and I do not know their fate; the others recovered on board, after a long course of mercurial preparations.

As almost all these cases of fever occurred in the hot autumnal months, while the ship was at anchor in Port Mahon, it may be necessary to mention, that the upper end of the harbour is shallow, the depth of the water varying (although there is no tide,) with the direction of the wind, and that, into this part a small stream, loaded with putrefying vegetable matter, discharges itself, rendering the shores very offensive in hot weather. We lay about three quarters of a mile distant from the upper end of the harbour.

I have been induced to transmit to you the above account of the disease, lame and imperfect as it is, from reading the paper in your Journal for October last, written by Dr Burnett. I am sensible, that any thing I can individually say will be little additional authority for adopting the practice recommended by him; but, when I tell you that the mode I have detailed is that to which I was advised on going on the station, not only by Dr B.'s predecessor, but also by several of the ablest surgeons in the fleet, it may have some weight.

I may remark, that, on first going on the Mediterranean station, it struck me that there was something in the climate peculiarly predisposing to inflammation. I was led to think thus by the great number of the crew (I may venture to say one half,) that were attacked with inflammatory tumors of different kinds. Most commonly they were of the nature of furunculi, terminating in sloughing of the cellular membrane, but, not unfrequently, they formed abscesses of considerable size, discharging healthy pus. They were often seated in the cellular membrane surrounding the patella, and, in several cases, the inflammation extended to the joint, producing extensive disorder of the system, and requiring copious bleeding, both general and local, together with the strictest antiphlogistic regimen, before it was subdued.

London, 27th November 1812. R.

IV.

Case of Diseased Uterus, with the appearances on Dissection. By THOMAS SALTER, Member of the Royal College of Surgeons, London. *(With an Engraving.)*

N. S. 32 years of age, of a sallow complexion, with dark hair and eyes, became, soon after her delivery of a dead child, affected with severe pains in the region of the uterus, attended with a slight discharge from the vagina. As she had formerly had gonorrhœa, having been a woman of somewhat loose habits, the symptoms of which she complained were supposed to proceed from a disease of venereal origin. Her complaint was treated accordingly, but without the least mitigation of her sufferings. On the contrary, her pains increased to a degree so distressing, as to induce her to apply for relief to a variety of practitioners, as well of the faculty as empirics.

She took a great quantity of mercury indiscriminately; besides which, it was administered to her three times, at intervals of no less than a year each, so as to produce ptyalism. This, as is usual in the cure of the venereal disease, was kept up for a considerable while. Had her case been merely venereal, it must, it was thought, have yielded to this rigid treatment.

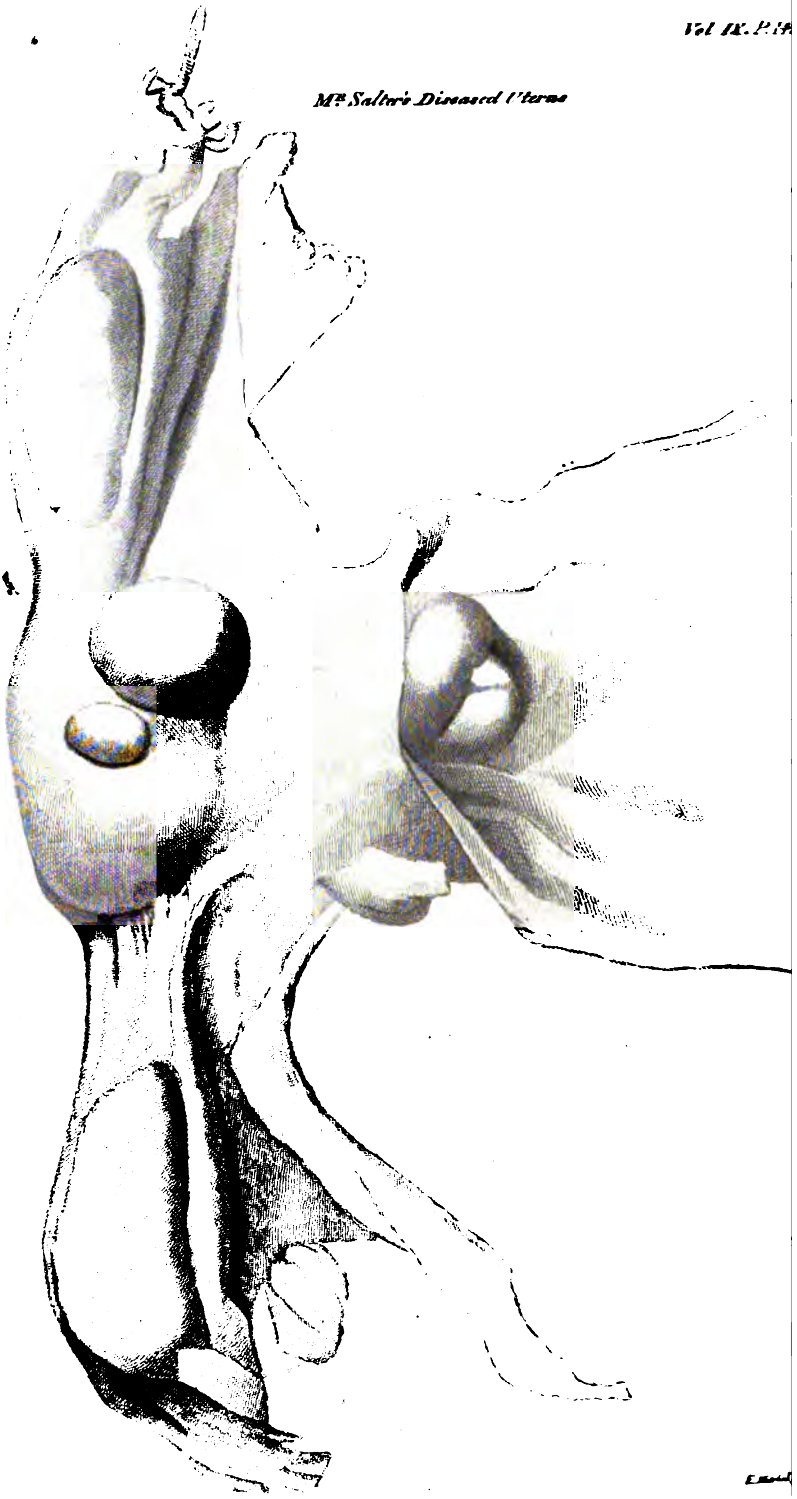
Under a notion, therefore, that a cancer might be forming in the uterus, the conium and opium were administered in large doses. From the former she experienced no beneficial effects, and the latter afforded an ease only temporary. The catamenia did not once appear after her delivery.

From herself and her friends I received the above account, nor have I any reason but to believe it, in every particular, to be quite correct.

She had been in this suffering state between five and six years, and it was within six months of her death when I was consulted. At this time she was greatly reduced, enduring much from pains of a lancinating description, referred immediately to the seat of the uterus. No discharge of any kind from the vagina; and, on examination, the os tincæ was found free from disease. She had not discontinued the opium from its first administration; for, as it afforded her some relief, she was very averse from ceasing to take it, as well as from making trial of any other remedy.

As so much had already been done to no purpose, and, considering the obscurity of the case, and the ravages which the disease

Mr. Salter's Diseased Uterus



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ease had been, and was still making on her constitution, I did not conceive it possible she could recover. To have deprived her, then, of the means by which she obtained a partial ease, would have been cruel, though it had appeared any thing like advisable. Consequently I directed that the opium should be continued as before, with the occasional use of aperient medicine to counteract its constipating effects on the bowels. Her bodily health was not, during the greater part of her illness, so far deranged as materially to affect either her appetite or digestion.

Her mind, however, a few weeks previous to her death, and when the pains appeared to be very acute, was at times in a state of derangement. During these paroxysms she made several attempts to destroy herself, so that it became necessary to confine her, and to remove every thing of a dangerous tendency out of her way. Finding she was foiled in these attempts on her person, she refused all kinds of sustenance, and, in a state of great wretchedness, died in a week.

On examination of the body after death, the abdominal and thoracic viscera were found to be in a healthy state. In the gall-bladder, however, was a calculus of the size of a nutmeg. On the posterior surface of the body of the uterus were found two tumors. The diameter of the largest, at its base, extended from a longitudinal line drawn through the middle of the uterus to its right margin. The other was situated a little to the left side, and nearer to the fundus uteri, and was about the bigness of a common marble. The annexed engraving will give an accurate representation of the size and relative situation of the tumors. The whole uterus appeared red, and more vascular than natural, and vessels were observed ramifying on the surface of the tumors. A portion of the largest was taken out in order the better to examine its structure. The superficies, an eighth of an inch thick, resembled, in colour and texture, the other parts of the uterus. The central part was of a light colour, and very hard; but no ligamentous bands were to be seen, through a lens of very considerable magnifying powers.

The os uteri was in a healthy state, and the cavity free from disease.

From the whole, it appears to me, that, in cases of a similar nature, it would not be advisable to administer mercury, unless it could be clearly proved that the patient had been the subject of chancre; and, in the absence of symptoms of open cancer, the most proper treatment would, I conceive, consist in the judicious use of such means as would diminish local increased vascular action;—such as the frequent application of leeches and blisters to the pubes and perinæum, with the employment of laxatives;

tives, the operation of which is confined to the upper part of the alimentary canal.

From the appearance of this uterus, the disease which it had undergone was evidently the effect of a slow inflammation. This, perhaps, is the case with all tumors that are strictly denominated scirrhous, although the inflammation may be of a peculiar kind. Now, as we know that a variety of swellings become scirrhous, which were not so in their origin, and which, in all probability, would have yielded to such remedies as diminish inflammation, it is highly important that this should be held in mind, when we have reason to suppose that morbid alteration in the structure of the uterus is taking place. Complaints of this organ are wholly out of the reach of the knife, and when that dreadful disease, cancer, has once established itself there, I believe it is now universally acknowledged, that nothing can be done for the relief of the unfortunate sufferer, besides what is merely palliative.

Poole, September 8, 1812.

V.

Complicated case of Cancerous Stomach. By WILLIAM COOKE, Member of the Royal College of Surgeons, London.

MRS WRIGHT, the subject of this case, was eighty-two years of age, but tolerably active.

During the year 1811, she was occasionally afflicted by pain in her stomach, but it was so slight and transient as not to suspend the performance of her ordinary duties.

In January 1812, when drawing herself upwards in bed, she experienced a sensation that indicated the displacement of some of the abdominal viscera, (according to her own description), but the immediate inconvenience was not sufficient to induce an application for medical assistance.

From this period she had constant soreness of the abdomen, and almost continual pain about the umbilicus. The bowels were usually costive.

In August the degree of suffering considerably increased, both from the tender state of the abdomen, and from the more circumscribed pain about the navel. On the second of September, I was desired to see her. Examining the belly as she lay in bed, I found that the umbilicus was ulcerated externally, and, upon making pressure a little above it, I perceived a hard substance, about the size of an egg, within the abdomen, the lightest touch on which gave pain.

Her bowels were confined; pain great and constant; sickness urgent, and frequently recurring; her nights watchful, but pulse good.

The nature of the case appeared such as not to warrant an expectation of other than temporary relief; I, therefore, only directed that the bowels might be kept open; that rest should be obtained by opiates; and that the diet should be light and nutritious.

The medicine administered to open the bowels brought away some hardened scybalæ, in very small lumps, and the opiates produced repose.

Occasionally after this time diarrhœa and tenesmus supervened, but it was *generally* requisite to excite intestinal action by artificial means.

Towards the end of September her strength rapidly decreased. She complained of severe burning and prickling sensations about the stomach, and vomited dark-coloured *semifluids*. Her stools were often bloody and offensive. She died on the third of November.

Sectio Cadaveris.

The day after her death I examined the body. The greater curvature of the stomach, a mass of omentum resembling the pancreas in size and shape, and the transverse arch of the colon were united together, and formed an indurated substance. The coats of the former viscus were so extremely tender in the lesser curvature, as to tear by the weakest effort. Its cavity was considerably diminished. The cardiac half of the villous coat was slightly thickened and inflamed. In that portion of the greater curvature nearest the pylorus, the coats were greatly thickened, except where they were destroyed by a large ulcer. The circumference of this ulcer was so thickened and puckered up, that it resembled a purse. When this margin was put on the stretch, it measured from two to three inches in diameter, but, when allowed to contract, it did not exceed one inch. In its contracted state, the depth of the ulcer was about an inch and a quarter. In some places the ulceration shot beyond the principal boundary, and destroyed the villous coat; and wherever this occurred, it also was encircled by a ridge, corresponding in appearance with that round the larger ulcer. At the bottom were several dark-coloured sloughs, and two openings by which it communicated with the cavity of the abdomen. One of these was nearly large enough to admit the little finger within it, and the other was capable of receiving a goose-quill.

In two or three places the small intestines were thickened. I removed one of these morbid parts, which occupied about an inch of the ilium. The coats on one side were at least half an inch thick, hard, and had two openings through them, sufficiently large to allow a probe to pass with facility. At the caput coli was a mass of disease as large as the fist, which, on examination, I found to arise from enlarged glands, situated between the peritoneal and muscular coats, and varying in size from that of a pea to a large walnut. They were firm in structure, and variegated in appearance. The villous coat of this part was inflamed.

The general appearance of the liver was healthy; but a "white tubercle," about the size of a walnut, existed on that part of the right lobe which is contiguous to the broad ligament. The characters of this tubercle exactly agreed with Dr Baillie's description of them.

There were two small calculi in the gall-bladder. The right ovary was enlarged and ulcerated, and the ulceration seemed extending itself to the adjacent parts.

I ought to have stated, that the ulcer in the stomach extended to within half an inch of the pylorus, but did not affect the orifice in the smallest degree.

There was no appearance of omentum, except that already described; nor was there much more fluid pervading the abdominal cavity than usual.

The absorbent glands situated in the lesser curvature of the stomach, and in some parts of the mesentery, were enlarged.

Plaistow, Essex, December 1st, 1812.

VI.

Case of Brain-Fever following Intoxication; with some Observations.

By John Armstrong, M. D. Sunderland.

Being assured that the disease which I described under the name of Brain-fever, in the last number of the Edinburgh Medical Journal, is yet neither sufficiently known nor investigated, I am induced to publish the detail of a case which lately came under my care, and trust that it may prove a mean of leading to that comprehensive investigation of the disease, which the honour of the faculty, and the interests of humanity, both seem to demand.

On Friday morning, the 20th of November last, I was called to visit Mr B. J. a short spare man, in the year of his age; who, I was told, was so very ungovernable that his friends had provided a strait-waistcoat for him, and only waited my approbation to put it on. I found him in a state of extreme perturbation; impressed with the idea that two men were lurking in the adjoining room, who were determined to murder him, and who had repeatedly, in the course of the morning, fired pistols at him with that intention. In order to escape from the supposed assassins, he had just made an attempt to leap through the chamber window, and had only been prevented from so doing by the interference of some relations, with whom he had been struggling very hard. I endeavoured to pacify him, by assuring him that no one should do him any injury, and at last prevailed upon him to sit down. Occasionally, however, he looked at me suspiciously, and, upon the least noise being made below stairs, started and stared wildly round the room. His hands were very tremulous; his pulse soft, and easily compressed, and about 100 in the minute; the skin, though covered with perspiration, was rather hotter than natural; the tongue white, and, from the account of his attendants, his thirst urgent. His breathing was rather hurried. He occasionally sighed deeply, and at intervals he was attacked with a dry hollow-sounding cough, which appeared to shake his whole frame. His face was pale, and his countenance full of anxiety. To all my questions his answers were confused, and not at all to the purpose; he hesitated almost at every syllable, and mistook the pronunciation of many words. On inquiry, I learnt that he had latterly been in a state of intoxication, more especially in the preceding week, and on Saturday the 14th of November; since which time he had taken less stimulus than usual, with the intention of becoming temperate. The following particulars were likewise related to me. On Sunday, the 15th of November, he complained of being very languid, took little food, and only drank about two glasses of wine, a small quantity of ale, and half a glass of gin. Towards the evening he grew rather feverish, and passed an uneasy and sleepless night. He remained nearly in the same state during the ensuing Monday, till late in the afternoon, when he was seized with a violent hollow clanging cough, which made him perspire profusely, and was very troublesome through the night, which he passed, as before, without sleep. On Tuesday morning he had a severe fit of coughing, after which he became exceedingly fretful and irritable, the slightest contradiction throwing him into an excessive passion. In the latter part of the day he refused both wine and food, asserting that he was confident some wicked people were watching an opportunity to poison him; and, when preparing to go to bed in the evening, suddenly started, as if somebody was about to lay hands upon him. He soon afterwards, however, went to bed, but obtained no rest whatever. From this period the distraction of mind increased, and he was in constant alarm about the safety of his person. On Thursday morning he took a saline purgative in some broth, which produced three tolerably copious evacuations, without procuring any relief; on the contrary, he seemed evidently worse after them. At an early hour in the evening he desired to go to bed; but, hearing a noise made by a servant beneath his chamber, he leapt up in great agitation, declaring that two men had just entered the house with the design of murdering him. Being somewhat calmed, by the kindness of his friends, he went to bed again, and begged them to be watchful in the night. He did not seem at all disposed to sleep, but talked at intervals about his life being in imminent danger from fire-arms and poison, and kept constantly gathering the bed-clothes about him till day-light, when he rose, much agitated with the fear of assassination, and has since continued restless and alarmed. His wife, an intelligent woman, informed me that for some years past he had been in the habit of using spirituous liquors very freely, and that he had occasionally been afflicted with attacks of the same disease before, but in a much slighter degree, which had always ceased on a moderate portion of good wine being daily allowed him.

Judging from all that I had heard of the patient's habits, and seen of his present situation, I concluded, that the disease under which he laboured was that peculiar affection of the nervous system, which, in this part of the country, is commonly called brain-fever. His friends were, therefore, advised not to think of putting the strait-waistcoat upon him, but, on the contrary, to allow him to walk freely about the house, and endeavour to soothe him with the kindest treatment, and, if possible, to avoid contradicting him. They were also ordered to give him rather more than half a bottle of Madeira wine in twenty-four hours, a moderate quantity of ale, or porter, and strong beef-tea, or mutton-broth, as a common drink and diet. The following draught and mixture were also prescribed.

℞ Tinct. opii gutt. xlviii.
Aq. menth. pip. ℥vi.
Sp. lavend. comp. ʒij. fiat haust.

This draught to be taken immediately.

℞ Aq. menth. pip. ℥vss.
Tinct. opii. gutt. xc.
Sp. æther. vitriol. comp. ʒiiss.
Tinct. card. comp. ʒiij. fiat mist.

Three table spoonfuls of this mixture to be given every four hours, till sleep be procured.

On the evening of the same day I paid another visit to the patient, and had the pleasure of finding him rather more composed, though he still often expressed strong apprehensions of plans being laid by two of his acquaintances against his life. The tremor of his hands was considerably lessened, his skin cooler, and his pulse stronger than in the morning, and reduced to eighty-four in the minute. He had taken the opiate draught, one dose of the mixture, about four glasses of wine, some beef-tea, and a pint of mild ale. The mixture was recommended to be administered through the night, and the wine and diet to be continued as before.

Saturday morning, November 21st, eight o'clock.—Shortly after my departure last evening, he became very outrageous, on being contradicted by one of his friends, and he refused every thing that was offered to him for about two hours, but afterwards grew quieter, and took his medicine in the night, without its inducing sleep; but could only be prevailed upon to take about two glasses of wine, and very little ale or food. During this visit I had great difficulty in obtaining answers to the questions which I put to him, for he seemed the whole time as if in earnest conversation with some person,—alternately speaking, and listening attentively, as if for a reply. His pulse was about ninety in the minute, soft and weak; the surface of his body rather hotter than natural; his hands tremulous; and his tongue white in the middle, as if streaked with cream, but clean about the edges. The mixture was again repeated, increasing the quantity of the tincture of opium to 120 drops; and his attendants were directed to endeavour to prevail upon him to drink more freely of wine and ale.

Saturday evening, nine o'clock.—Has taken three doses of his last mixture, more than a gill of wine, some ale, and strong mutton-broth, all of which his stomach has retained. He appears, in every respect, better, and his pulse is reduced to seventy-six in the minute. Answers one or two questions pretty accurately, but, if more be put to him in succession, he hesitates, becomes confused, and relapses into delirium. The remaining part of the mixture was given to him, and another prescribed, containing 100 drops of the tincture of opium, and directed to be taken through the night, in the same manner as before.

Sunday morning, eleven o'clock.—Has taken his wine, food, and medicine, whenever presented to him, but has had no sleep in the night, though he remained very quiet till about six o'clock this morning, when one of the people who sat up with him, refusing to let him go down stairs, he burst into a violent passion, attempted to break open the door of his chamber, and persisted that he was not in his own house, but detained by force in some other. His wife, on hearing the noise, came into the room, and told him he might go down stairs, or anywhere he thought proper, and endeavoured, in a good-humoured way, to convince him that he was really at home; and at length succeeded, by shewing him the different apartments of the house. Shortly afterwards he requested a cup of coffee, which he appeared to relish, and then went to bed again, and fell into a sound tranquil sleep, from which he has not yet awakened. Not wishing to disturb the patient, I left the house without seeing him; but, on calling again about two o'clock in the afternoon, found that he had just risen, collected and rational upon every subject, but had no very distinct recollection of any thing that had passed during his illness. The wine and nutriment were continued as usual, and the mixture directed to be repeated in the course of the day.

Monday morning, November 23.—Has slept well all night, and feels much refreshed and invigorated; cough almost entirely gone; skin cool; tongue clean; pulse seventy, full and strong; and no irregularity of thought has been observed since the last visit. An infusion of colomba was prescribed, with some laxative pills, the former of which the patient continued to take a few days longer, when he returned to his business in perfect health, and has since had no relapse of the disease, having been very temperate in the use of wine, and refrained entirely from ardent spirits.

Observations on the Case.

Some facts were communicated to me, during my attendance on this patient, which seem to prove, that, in him, the complaint was closely connected with, if not dependent upon, the exhaustion induced by the previous excitement of spirituous liquors. If he happened to be inebriated several days successively, he lost his appetite, became weak, and symptoms of the disease were almost certain to appear; if he got intoxicated two or three days together, and then, as more than once had been the case, suddenly abstained from his usual beverage, an attack was equally sure to take place; but, if he had occasionally been intoxicated, with an interval of one or two days between each debauch, an attack could always be prevented by giving him his ordinary stimulus pretty freely. I have seen no other person similarly affected, in every respect, under such circumstances.

The case already described bears so striking a resemblance, in some of its features, to insanity, that, it is probable, if any practitioner not well acquainted with this peculiar disease of the drunkard had been called, in the present instance, to give an opinion, he would have hardly ventured upon the highly stimulating treatment here used and recommended. Whether, however, this complaint should be considered as a species of mania, or classed with pyrexiæ, I shall not now attempt to determine, but merely observe, that it is always preceded by watchfulness and fever, and that, to me, the subsequent delirium, in its rise and progress, appears more like that which proceeds from hunger, in persons previously healthy, as sometimes happens in mariners, for example, than any other kind I have seen. There are few diseases which require more accurate investigation than this; both with respect to the cause and consequent symptoms; for I have seen some patients so furiously deranged in this complaint, that the first impulse of my mind was to bleed, blister, purge, and use coercion; but, on a closer inspection, the tremulous and clammy hands, the weak compressible pulse, the pale anxious face, and deep involuntary sighs, deterred me from having recourse to such debilitating measures. In the mania commonly met with in practice, I have been led to believe, from the experience of others, as well as my own observation, that it is seldom proper to comply with the wishes of the patient; yet, as may be observed in the case before us, the reverse obtains in this disease; for, in general, it is injudicious to contradict him flatly, and the most soothing and complying means are found to answer the best purpose: indeed this is of more consequence than may appear at first sight. I have known more than one patient who actually fainted from passion, excited by contradiction on the most trifling subjects; and can easily conceive, that even death might be induced by the same cause, in an exceedingly irritable and exhausted constitution; indeed, I have reason to believe that this was really the case in one instance. Hence must appear the impropriety of enforcing any restraint that is not absolutely requisite for the immediate safety of the patient. The application of the strait-waistcoat, in particular, should be carefully avoided, since it is always a highly dangerous expedient. The cough, in this case, was merely accidental, and not a part of the disease, though it is common to drunkards, and often depends more upon the state of the stomach, and circulation, than the lungs themselves, and may frequently be speedily removed by stimulant remedies; yet I have observed, in men of intemperate habits, that this kind of cough is sometimes the precursor of hydrothorax, and complaints of the liver. The pulse, in the present case, was slower than is usual in this disease, and never exceeded one hundred in the minute, and, what is a favourable circumstance, was always diminished in its frequency, and increased in its force, by the exhibition of wine and opium. At first it was soft and compressible, though, on laying the finger lightly upon the artery, one might have been induced to think that the pulse was really full and strong; but, on gradually increasing the pressure, till the extent of the resistance of the circulation in the extreme vessels could be fully ascertained, I found, that, at every pulsation, the blood only feebly, and as if by a forced effort, distended the artery, and then suddenly left the finger, and returned as before. Generally speaking, I hardly know of any better test of debility than such a pulse, nor a more certain indication of the propriety of using stimulants; yet, after all, it is very seldom safe to trust to the pulse alone as a guide in the treatment of this, or any other complaint; and, perhaps, an ancient physician was not much mistaken, when he said it was a most fallacious thing. Neither would it be proper that a medical man should lay down his plan of treatment under an idea that debility must always be resisted by stimuli: for, every professional person of experience must know, that debility is often the deceitful mask of inflammatory and other diseases, which require copious evacuations to be subdued. In the case, however, already detailed, all its circumstances, if minutely attended to, clearly point out the necessity of an invigorating method of cure. From the Friday morning, when I first visited the patient, to the ensuing Monday, comprehending a space of seventy-eight hours, he took about four hundred and fifty drops of laudanum, more than an ounce of æther, two bottles of wine, four pints of mild ale, and a considerable quantity of beef-tea, and mutton-broth; and it will be seen, by a reference to the daily notes, that his improvement was rapid from the time he began to take his wine, food, and medicine regularly. Upon the whole, I have not met with any case which more strikingly illustrates the advantages derived from the liberal use of wine, nutriment, and opium, in this important disease.

Since the above was written, I have been consulted in another case of brain-fever following intoxication. It occurred in a man who had long led an irregular and dissipated life; and was very properly treated by the attendant apothecary: but, unfortunately, his efforts were not seconded by the patient's friends, who, from an amiable, but dangerous anxiety, neglected to give him the medicines which were prescribed in the beginning of the disease.

Nothing, however, very remarkable, happened in the case, till the patient became extremely violent one night, when the people about him bound him to the bed, in a strait-waistcoat. The next morning the apothecary remonstrated with them against persevering in such a measure, and advised them to unbind him, and allow him his liberty. As he had repeatedly struck at his wife and another woman, they took upon themselves to disregard such judicious advice, and suffered nearly the whole day to elapse before the strait-waistcoat was removed. From the time of its application, it appears that he had almost constantly struggled to get loose, so that considerable exhaustion, and copious perspirations were produced; moreover, he had refused both wine, medicine, and food, and talked incessantly. He lingered only a few hours after he was unbound, and, a short time before his death, became calm and rational. The attending practitioner, who saw much more of the case than myself, considered it, from the first, an exceedingly dangerous one, principally on account of the furious delirium, the excessive debility, and the previous manner of life of the patient, and afterwards thought, from the want of proper firmness and intelligence on the part of his relations, that its fatal termination was, in all probability, accelerated. Perhaps the most important instructions to be derived from this melancholy case, are, that it shews the pernicious effects of coercion, and strikingly demonstrates the necessity of using mild and persuasive expedients, in administering the remedies requisite for a disease always accompanied with great irritation and debility.

Repeated solicitations were made to obtain an examination of the head after death, and I regret exceedingly that they were not complied with, because I am persuaded, that dissection alone can fully establish whether this disease admits of any material variety of treatment.

Wearmouth Walk, Sunderland, January 11, 1813.

VII.—*Annual Meteorological Table for Sidmouth, Devon, 50° 41′ N. lat. 3° 13′ W. long.* By Dr Clarke.

1812.	Thermometer, North exposure.										Barometer.								Weather			Winds.			
																			Days.						
Months	Days.	Highest.	Wind.	Days.	Lowest.	Wind.	Mean for the day.	Mean for the night.	General mean.	Greatest variation in 24 hours.	Days.	Highest.	Wiud.	Days.	Lowest.	Wind.	Mean for the month.	Greatest range in 24 hours.	Fine.	Cloudy.	Wet.	N. and N.E.	E. and S.E.	S. and S.W.	W. and N.W.
Jan.	30,	49°	S.W.	23,	20°	N.E.	42°	31°	37°	10°	18,	30.39	N.	29,	29.05	S.W.	29.96	.72	13	9	9	17		8	6
Feb.	19,	53	W.	6,	28	N.W.	48	36	42	12	19,	30.13	W.	29,	29.09	S.	29.64	.70	7	3	19	6	2	14	11
March,	7,	55	W.	17,	22	N.E.	46	34	39	10	9,	30.41	N.W.	20,	28.91	S.E.	29.78	.92	10	5	16	6	11	9	7
April,	2,	57	W.	17,	26	N.E.	52	36	44	8	21,	30.31	N.W.	1,	29.57	S.W.	29.97	.31	22		8	10	9	8	10
May,	27,	66	S.W.	14,	36	S.	59	44	51	6	1,	30.35	S.	29,	29.66	S.	29.93	.41	14	2	15	4	13	9	8
June,	11,	71	N	28,	37	N.E.	64	43	54	8	9,	30.51	S.E.	20,	29.50	S.W.	30.03	.48	15	2	13	4	8	12	12
July,	8,	75	S.W.	30,	36	S.E	67	45	56	13	11,	30.51	N.	28,	29.68	N.W.	30.06	.33	12	3	16	7	5	17	7
Aug.	19,	76	S.W.	7,	40	N.W.	67	46	57	9	13,	30.30	S.W.	19,	29.73	S.W.	30.07	.22	21	2	8	8	4	13	8
Sept.	2,	70	S.W.	18,	34	N.W.	66	40	53	9	12,	30.40	N.W.	28,	29.72	S.W.	30.13	.28	23	2	5	3	6	19	8
Oct.	2,	65	S.W.	28,	31	W.	58	40	49	14	4,	30.09	S.W.	19,	28.81	S.W.	29.57	.63	11	4	16	3	1	17	13
Nov.	1,	57	S.	22,	24	N.	48	36	42	8	22,	30.42	N.	17,	29.08	N.	29.99	.42	13	6	11	9	7	8	7
Dec.	1,	54	S.	13,	23	N.E.	59	31	35	8	28.	30.61	N.E.	17,	29.00	N.W.	30.00	.45	18	6	7	17	5	3	7

ANNUAL RESULTS.

	Thermometer.	*Wind.*
Highest, -	Aug. 19, 76°	S.W.
Lowest, -	Jan. 23, 20°	N.E.
Greatest variation,	Oct. 7, 8, 14°	S.W.
Mean for the day,	55°	
Mean for the night,	39°	
Annual Mean,	47°	

	Barometer.	*Wind.*
Highest, -	Dec. 28, 30.61	N.E.
Lowest, -	Oct. 19, 28.81	S.W.
Greatest range,	Mar. 3, 4, .92	
Annual mean,	29.93	

Wind.	*Times.*	*Wind.*	*Times.*
N. -	54	S. -	42
N.E.	40	S.W. -	95
E. -	13	W. -	38
S.E. -	58	N.W. -	66
	165		241
			165

Weather.	*Days.*	
Fine, -	179	
Cloudy, -	44	
	223	Fair.
Wet, -	143	
	366	

Annual Meteorological Table for Derby, lat. 52° 58′, N. long. 1° 30′ W. By Mr Swanwick.

1812.	Thermometer, north exposure.										Barometer, 170 ft. above level of the sea.								Weather.		Winds.				Rain.
																			Days						
Months	Day.	Highest.	Wind.	Day	Lowest.	Wind.	Mean for the day.	Mean for the night.	Mean for the month	Greatest variation in 24 hours.	Day.	Highest.	Wind.	Day.	Lowest.	Wind.	Mean for the month.	Greatest variation in 24 hours	Fair.	Wet.	N. and N.E.	E. and S.E.	S. and S.W.	W. and N.W.	In inches and decimals.
Jan.	19,	47°	W.	16,	25°	N W.	42°	31°	36°	12°	10,	30.18	N.	29,	29.12	S.	29.82	.50	25	6	4	2	8	17	1.15
Feb.	20,	52	S.	7,	30	S.W.	45	35	40	10	19,	30.03	S.	28,	29.15	S.	29.59	.65	20	9	2	6	13	8	1·74
March,	30,	58	S.W.	28,	23	S.E.	44	32	38	14	10,	30.31	N.	28,	29.13	S.	29.72	.54	16	15	12	8	7	4	4·15
April.	15,	55	S.E.	17,	26	N.	49	33	41	13	21,	30.00	N.W.	3,	29.30	W.	29.76	.31	20	10	8	9	3	10	·71
May,	29,	70	S.E.	8,	31	W.	59	41	50	18	25,	30.11	S.	12,	29.40	W.	29.73	.27	18	13	8	2	13	8	1·86
June,	7,	72	E.	27,	34	N.W.	60	42	51	14	8,	30.31	N.E.	19,	29.23	W.	29.83	.39	19	11	4	3	9	14	2·12
July,	9,	78	S.E.	4,	35	S.	60	47	53	14	9,	30.35	S.E.	2,	29.36	W.	29.98	.35	14	16	6	3	13	9	1.92
Aug.	18,	72	S.	12,	38	E.	61	47	54	9	14,	30.15	S.	1,	29.75	N.E.	29.93	.29	19	12	16	1	9	5	1.61
Sept.	21,	64	S.W.	25,	30	S.	58	42	50	16	12.	30.20	S.W.	28,	29.55	N.	29.69	.37	22	8	3	5	14	8	1.06
Oct.	4,	59	S.	27,	27	N.W.	49	37	43	15	4,	29.80	S.	19,	28.34	S.	29.26	.51	13	18		1	19	11	4.16
Nov.	1,	49	S.	20,	23	E.	40	32	36	9	22,	30.33	N.E.	14,	29.21	N.E.	29.77	.49	19	11	9	7	8	6	2.36
Dec.	1,	44	S.E.	9,	19	N.W.	54	29	32	9	7,	30.48	N.E.	17,	29.05	N.E.	29.86	.39	21	10	13	9	3	6	.95

ANNUAL RESULTS.

Thermometer.			*Wind.*
Highest, -	July 9,	78°	S.E.
Lowest, -	Dec. 9,	19°	N.W.
Greatest variation,	May	18°	
Mean for the day,		50°	
Mean for the night,		37°	
Annual Mean,		48°	

Barometer.			*Wind.*
Highest, -	Dec. 7,	30.48	N.E.
Lowest, -	Oct. 19,	28.34	S.
Greatest range, Feb.		.65	
Annual Mean,		29.74	

Weather.	*Days.*
Fair, -	227
Wet, -	139
	366

Quantity of rain for the year.	
Inches,	25.79

Wind.	*Times.*
N. and N.E.	88
E. and S.E.	56
S. and S.W.	119
W. and N.W.	106
	366 Obs.

General Remarks.—The lowest temperature in both tables is ascertained by a register-thermometer, on Six's construction, which presents the lowest degree of cold since the last observation, and always refers to a period of twenty-four hours, although the greatest cold is generally admitted to be about one hour before sun-rise. From an accurate account lately kept of the temperature at 11 at night, it has not been possible hitherto to obtain any rule for comparing these observations, the thermometer falling so irregularly in the course of the night, and, in three instances, last month, (January) as much as 12°, although the difference in the mean of these observations for that month was only 4°. It is highly necessary this should be perfectly understood before any conclusions are drawn from a comparison of these tables. The following tables of temperature, formed from observations made at different periods, may nevertheless be found interesting.

1812.		*Strand, London,* Noon, & 11 P.M.	*4 miles N.N.W. of St Paul's.* Time not noted.	*Plaistow.* Time not noted.	*Carlisle.* Time not noted.	*Bristol.* Time not noted.	*Derby,* by register-therm.	*Sidmouth,* by register-therm.	*Edinburgh.* Morn. Noon.	*Near Edinburgh.* Morn. Noon.
Jan.	Highest,		45°	50°	50°	48°	47°	49°	47°	49°
	Lowest,		22	26	10	20	25	20	21	26
Feb.	Highest,	56°	50	54	52	57	52	53	51	54
	Lowest,	32	26	26	32	27	30	28	32	29
March,	Highest,	57	53	59	53	54	58	55	47	53
	Lowest,	29	26	24	23	25	23	22	23	23
April,	Highest,	56	57	58	51	56	55	57	50	54
	Lowest,	28	24	25	30	35	26	26	29	30
May,	Highest,	71	71	76	72	74	70	66	63	69
	Lowest,	42	52	32	35	44	31	36	32	35
June,	Highest,	74		75	76	73	72	71	70	77
	Lowest,	48		39	46	45	34	37	48	48
July,	Highest,	76		75	68	75	78	75	68	76
	Lowest,	49		41	47	54	35	36	48	47
Aug.	Highest,	76		78	68	77	72	76	65	72
	Lowest,	51		43	47	53	38	40	50	44
Sept.	Highest,	70		73	64	71	64	70	68	67
	Lowest,	42		34	38	41	30	34	41	38
Oct.	Highest,	66	65	69	60	63	59	65	63	62
	Lowest,	34	40	34	33	31	27	31	36	53
Nov.	Highest,	54	54	55	53	52	49	57	51	52
	Lowest,	26	26	24	20	17	23	24	25	26
Dec.	Highest,	53		52	48	52	44	54	48	46
	Lowest,	23		18	15	14	19	23	15	14

Comparative Temperatures.

Nottingham.			*Sidmouth.*		
1807.	Highest temperature,	80°, July.	1811.	Lowest temperature,	22°, Dec.
1808.	Highest ditto,	89°, July.	1812.	Highest ditto,	76°, Aug.
	Lowest ditto,	17°, Jan.		Lowest ditto,	20°, Jan.
1809.	Highest ditto,	78°, July.			
	Lowest ditto,	17°, Jan.			
1810.	Highest ditto,	82°, Sept.			
	Lowest ditto,	14°, Feb.			
1811.	Lowest ditto,	13°, Jan.			
	Mean for the four years, 48.75.				

VIII.

On Unusual Cases of Anorexy. By BENJAMIN GRANGER, Surgeon.

SINCE reading the account of Ann Moore's case, by Dr Henderson, I have seen the patient, in company with a medical gentleman; and as our observations in some particulars differ from those made by Dr Henderson, I may perhaps be allowed to state the result of our inquiries at this visit.

The patient's lower extremities were in a state of paralysis; and both legs were doubled under her, and had been fixed in this retracted position for many months. The two outermost fingers of the left hand were also paralytic, and confined in the bent posture; consequently the index alone, from its having an extensor distinct from the communis, admitted of *complete extension.* Dr Henderson, however, says, that the patient *immediately after* having denied the power of moving the middle finger, "was observed to use it *without any difficulty.*" There must be some mistake in this. The chylopoietic viscera had undergone great change from disease; for the abdomen was depressed to such a degree, that, on the right hypochondriac region, the whole breadth of the hand could be placed *under the chest* parallel to the diaphragm. She had not lain straight down for a long period, and, on taking rest, she usually leans forwards on pillows. The inability of lying down, proceeds, I apprehend, from the contracted state of the abdomen, and from the adhesions which the integuments may have formed under the chest.

Lime-water became rather turbid after she had respired through it about a minute. She stated, that two gentlemen from Derby had lately tried a similar experiment. She has declared that she is willing to submit to a second watching by respectable persons, even by ministers and medical men. From the distortion of her frame, I did not think that the evacuation of urine could have taken place in the way which Dr Henderson has suggested. Certainly the urine of one person could not have produced that very "*offensive urinous smell*," which Dr Henderson has mentioned.

Although Dr Henderson has argued against the *possibility* of this woman's abstinence, yet he has admitted, that "well authenticated" examples of fasting have occurred, in which the phenomena exhibited were not much less remarkable. He states, that a person fasted *eighty-eight days*, (that is, first thirty-four days, and soon after fifty-four days,) *without the flesh being materially reduced, or the pulse weakened, or the respiration disturbed.* That another person lived forty-eight days upon a pint and half of water a-day; and so far from his strength being reduced, for thirty-eight of the days he actually "*stood in the same position.*" Such were the cases described by Dr Eccles and M. Ponteau; and they incontestably prove, that there are states of the constitution in which abstinence has no effect on the system *. Now, as individuals, in these cases, have abstained from nourishment for *eighty-eight days*, without any prostration of strength,—may not other individuals, in similar states of the constitution, have fasted for much longer periods; and how is the extent of these periods to be defined? In reference to this subject, I may mention the extraordinary examples of long abstinence which have frequently occurred in the brute creation, and with the less impropriety, because a brute animal cannot be an *impostor.* "We have frequently seen," says the writer of the article abstinence, in Dr Rees's Cyclopædia, "rattle-snakes that have subsisted many months without any food, *yet still retain their vigour and fierceness.*" Dr Shaw, (Trav. page 411,) speaks of a couple of *cerastes*, (a sort of Egyptian serpents,) "which had been kept five years in a large crystal vessel, without any sort of food, unless a small quantity of sand, wherein they coiled themselves up in the bottom of the vessel, may be reckoned as such; yet, when he saw them, they had just cast their skins, and were perfectly brisk and lively."

What the blood loses, in these cases of anorexy, by the organs of excretion, is replaced by absorption from the atmosphere. In cases of diabetes, absorption from the atmosphere takes place to a large amount. That the weight of the body may be increased by absorption from the atmosphere, has been sufficiently proved by the experiments of Dr Watson. After all, examples of long abstinence are no more contrary to "the order of nature," than the instances of spontaneous combustion of the human body. "There are even instances, (says Johnson,) of this combustion being so rapid as to consume the greater part of the body. Thus a female described by Wilmer, or the *Inflammable Woman of Coventry*; Conelia Bandi, near Cesena in Romana; another woman at Christ-church, in Hampshire; and Grace Pitts, at Ipswich, were consumed by an internal fire; so eager were the principles of which they were composed to combine, as Dr Beddoes says, with oxygen. These remarkable instances, however, of quick combustion, carried on in the human body, are very rare." (History of Animal Chemistry, Vol. III. page 107.)

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* The celebrated Dutch anatomist *Ruysch* has described a remarkable case of long abstinence. The patient died; and, on dissection, the stomach and intestines were found diminished in size to an unexampled degree. (*Lieutaud*, T. I. Obs. 30.)

Burton-upon-Trent,
Feb. 12, 1813.

IX.

On the Dangerous Effects of the Infusion of Tobacco administered as a Glyster. By a Physician.

Being of opinion, that the faithful publication of errors in the cure of diseases, are of no little importance to the improvement of the science of medicine, I make no apology for laying before your readers the following case of unsuccessful practice.

Although the infusion of tobacco has been frequently used with success in obstinate cases of colic, yet I am convinced it has sometimes done harm, and in every case, from its great activity, it requires to be administered with great caution. Some years ago, I was desired to visit a young man, who was seriously indisposed with the most violent symptoms of colic, for which he had taken a variety of purgative medicines to no purpose. I suggested a glyster of the infusion of tobacco, in the proportion of two drachms to eight ounces of boiling water. No sooner was it administered, than he was seized with something like convulsion, became speechless, and died in an hour or two. I could not obtain leave to inspect the body. My patient's case was so very alarming from its commencement, that it is doubtful whether any medicine would have been of essential service; yet I think there can be no doubt that the fatal event was hastened by the glyster. I therefore think it my duty to caution practitioners, especially the younger branches of the profession, against prescribing so large a dose of this remedy. When it is deemed necessary, I should not venture upon more than half a drachm of tobacco in twelve ounces of boiling water, and, if it did not produce the desired effect, the dose might then be gradually increased with the greatest propriety. In this formula, I imagine I followed the advice of the venerable Dr Heberden, but found I was mistaken, for he only ordered half the quantity of this herb in infusion.—See Heberden's Commentaries, English edition, page 270. Nevertheless, I am the more particular in recommending a small dose at first, because I find the same excellent physician, in the Latin edition of the same book, says, "In aquæ ferventis uncias duodecim mittitur foliorum drachma, vel etiam drachmæ duæ, et humor colatus in alvum infusus vomitum non excitavit." page 225. Dr Blane too orders two drachms in a pint of warm water in the same cases. See Thesaurus Medicaminum, 3d edition, page 70. Another intelligent physician, Dr Anderson, in his Medical Remarks on Evacuation, gives the same dose in eight ounces of water, but very properly adds: "it must be cautiously used in the irritable nervous habit, lest it bring on tremors, spasms, sickness, and vomiting, which it is very apt to do, especially if made very strong." See page 59th, 2d edition. Notwithstanding these high authorities, from its fatal effects in the case above mentioned, I think the practitioner would do well to pause before he prescribes so largely of this deleterious drug. If there is good reason for deviating from the practice of such excellent physicians, what must be thought of the advice given in one of the most popular medical works of this country? Surely the author of the Domestic Medicine must have been unacquainted with the practical effects of tobacco, when he orders no less than *an ounce* to be boiled in a sufficient quantity of water for a glyster, with the view of exciting vomiting, in the case of substances being stopt between the mouth and stomach. See Domestic Medicine, 16th edition, page 606. If an infusion of two drachms has produced fatal effects, is there not much greater necessity for warning the practitioner from the dangerous experiment he recommends?

X.

X.

Case of Hæmatirrhœa, or Petechiæ without Fever, which terminated fatally in the Hospital of the 6th Dragoon Guards, at Piershill, near Edinburgh. By E. Walsh, M. D. Surgeon of the Regiment. Communicated by Dr Somerville, D. Inspector of Army Hospitals in North Britain.

Dear Sir,—When I transmitted to you the first report of the unusual case which lately occurred in the hospital of the 6th Dragoon Guards, you thought it of sufficient interest to shew it to Dr Gregory, Professor of the Practice of Medicine in the University of Edinburgh; and, from the appearances on inspecting the body after death, you expressed a wish to receive from me a more circumstantial narrative of the progress of the disease, than was contained in the sketch formerly sent.

In compliance with your wish, I shall therefore proceed to state, more minutely, the particular circumstances of a disease, which never had before fallen within my experience, nor, indeed, do I recollect to have read any description of symptoms analogous to those now to be mentioned.

The excellent regulations of the department to which we belong, enable me to furnish you with a faithful transcript of the report of the symptoms of the disease, and the practice adopted, as it was made at the moment; and, I may add, with the closer attention, from the novelty of the disease.—I have the honour to be, &c. (Signed) E. Walsh, M. D.

Piershill, January 30th 1813.

Dr Somerville, D. Inspector of Hospitals.

James Curry, private in the 6th Dragoon Guards, a native of Glasgow, 30 years of age, a robust, well-made man, of a dark complexion, steady, and sober in his habits, and heretofore healthy, was admitted into the regimental hospital, on Wednesday morning, December 28th 1812.

On the preceding Saturday, he rode from Haddington, where he was stationed, to Piershill, a distance of sixteen miles, in perfect health.

The next day (Sunday the 27th) he found himself unwell; he felt a dull pain in his head, which was followed by slight shiverings, and sickness at stomach. He was not however so ill as to be prevented from eating his dinner; and, in the course of the evening,

ing, the symptoms disappeared, or were so slight as to be unnoticed

That night he slept as well as usual, and rose early on the 28th, intending to return to Haddington, but he was a good deal startled at observing that he spat blood, never having done so before. This induced him to report himself sick, and I examined him at the hospital, at 9 o'clock, A. M.

There was an eruption of petechiæ, numerous on the shoulders, across the breast, and on the neck, where they were not elevated above the cuticle; a few, more prominent, appeared on the forehead and temples, close to the hair, and some of a still larger size were seen on the hairy scalp. There were scarcely any discernible on the inferior trunk and extremities. These maculæ were of various magnitude; the largest not exceeding that of a pea. Their colour was a dark purplish brown, having a resemblance to, but more prominent, than those which sometimes occur in typhus fever.

On inspecting his mouth, petechiæ were found few in number, but large and distinct on the tongue, palatum molle, and as far down the throat as could be seen. From these there was a continual oozing of florid blood, which, mixing with the saliva, occasioned a constant bloody spitting. This appearance however, was unaccompanied by any other threatening symptom. The pulse (75 in a minute) was soft, full, and regular; the patient had no headache, pain, or weakness; no thirst, cough, or dyspnœa; he complained only of weight and sickness at his stomach, with an inclination to vomit. His skin was cool, but dry, and his belly bound. He had no symptoms whatever of pyrexia.

After using a bath of the temperature of 90°, for 20 minutes, he took a saline purge, in which was dissolved a grain and half of tartarized antimony. He was ordered spoon diet, and for his drink barley-water, sweetened, and acidulated with lemon-juice.

When I saw him again at one o'clock, the draught had operated by vomiting only. He threw up four quarts, at least, of a dark chocolate-coloured fluid, intermixed with numerous clots of blood.

He felt greatly relieved by emptying his stomach, and remained tranquil till night, when his skin became warm and moist. Wishing to encourage a perspiration, which might perhaps prove critical, I ordered the following medicine to be given immediately, and to be repeated an hour afterwards.

℞ Pulv. ipecac. compos. ℈i.
Camphor. gr iij. M.

Tuesday morning, December 29th.—He slept tolerably well, without retchings, and perspired copiously the whole night; but, at day-break, the nausea and vomiting returned, and he threw up considerable quantities of the same chocolate-coloured fluid, mixed with some clotted and some fluid blood.

A further eruption of petechiæ appeared. They now formed clusters on the trunk, and were scattered over the lower limbs, most numerous on the legs. He ate his breakfast with some appetite. His pulse 86, soft, and regular, but his bowels remained still unmoved. He took immediately

Pulv. rhei. ʒss. cum submuriat. hydrargyr. gr. vi.

and, subsequently to its operation, was ordered Decocti cinchon. ex acido sulphuric. acidulat. ℥ij quaq. hora sumend.

The purging powder was rejected in a fit of vomiting, in which some florid blood was thrown up. At noon the following medicines were prescribed:

Ol. ricin. ℥iss.
Ex. aq. menth. pip. ℥iii.
Cum. tinct. opii, gtt. xxx.

Et paulo postea bibat haust. effervescentem. This medicine he retained, and towards night it produced a copious evacuation from the bowels. The feces were mixed with grumous blood, and the same kind of matter which had been vomited. They were very fetid. He said he felt considerably better.—His pulse 80, was soft and regular, and the skin moist.

The acidulated decoction of bark was continued, which he did not throw up; the effervescing draughts were also retained, and were grateful, but any aliment taken was generally followed by nausea and retching.

Wednesday morning, December 30th.—He passed a tranquil night, without retching; but, whilst awake, the spitting of blood was incessant. On inspecting his mouth, the tongue appeared covered with a thick reddish-brown crust, yet round the edges, and at the tip, it was moist and of natural colour. Firm tenacious clots of blood adhered like polypi to the velum pendulum palati, and were with difficulty detached. The maculæ on the scalp had become larger, black, and felt almost like warts. His muscular strength had suffered a great diminution. His pulse became feeble and more frequent; but he complained of no headache or pains. He had no tendency to delirium. His voice was unchanged, and his respiration full, and free. A peculiar heavy offensive smell came from his body. His urine was intensely red, without sediment.

The acidulated bark was ordered to be continued, and occasionally the saline draughts: He was directed to gargle his mouth and throat frequently with a solution of alum and decoction of bark. His head, breast, &c. were sponged with vinegar and water, and a large blister was applied over the stomach.

At noon he had another copious fetid stool, in which there was much fluid blood. A change now took place for the worse; his features sunk; his right eye became tumid and black, as if ecchymosis had been produced by a blow; and the pupil of the left was contracted almost to a point. His sight, however, he said, was not affected.

Some punch was made for him, with a large proportion of lemon juice, in a glass of which a drachm of confectio opiata was mixed up. This cordial seemed to revive him; the punch was ordered to be continued.

About four o'clock P. M. he was seized with another most violent fit of vomiting, in which he threw up a larger proportion of pure florid blood than before, by which he was quite exhausted. The strength now rapidly gave way. His pulse became sunk, thready, and intermitting. The bloody sputum flowed from the angles of his mouth, from inability to throw it off. Yet his senses remained clear, for he inquired of the hospital serjeant what I thought of his situation.

About 8 o'clock P. M. he became comatose, and in an hour after was in a profound coma, with stertorous and laborious respiration. His pulse rose, and became full and slow, 60 in a minute, but it spread under the touch. The blister on his stomach rose as well as could be wished.

Thursday morning, December 31st.—He continued totally insensible, evidently in an apoplectic state, until four o'clock this morning, when he expired.

Appearances on opening the body.

On removing the integuments of the head, the dark red pustules were seen to have penetrated quite through the scalp, and to have left an impression on the cranium as if the head had been wounded by small-shot. The right temporal muscle was black, as if severely bruised. On elevating the scull, a large firm clot of blood (a table-spoonful) fell out. It had pressed on the brain under the left temporal bone, and was probably derived from the vessels at its base, as blood still continued to ooze from them. The contiguous vessels of the pia mater were turgid, and black, but the superior lobes of the cerebrum did not seem in a diseased state. A portion of the cranium, on each side of the sagittal suture, was remarkably thin and transparent; a circumstance probably having no relation to the disease which proved fatal.

On laying open the abdomen, the liver did not appear to be diseased; and in drawing forward the stomach, the spleen came into view, which, in this subject, appeared unusually small, but in a sound state.

Large but not numerous petechiæ were scattered along the duodenum; some, but still fewer, were to be seen on the small intestines, and none were perceptible on the great arch of the colon. On the pylorus and anterior cavity of the stomach they were numerous; but the great left curvature and superior orifice were so thickly covered with them, as to have the appearance of being sphacelated. Thus, the primary seat of the disease seems to have been the superior portion of the alimentary canal, gradually descending from the mouth downwards to the large intestines. It was ultimately extended to the bladder, and to the brain, there occasioning the apoplectic symptoms, and death.

As a narrative only was intended to be given, it would be foreign to that plan, to make any reference to such parts of the writings of Burserius, Willan, or other nosologists, as might be thought to bear a reference to the disease of which this man died.

XI.

A remarkable Case of the Dislocation of the Atlas. By E. LAZZARETTO, Esq. F. R. S. and Member of the Royal College of Surgeons, London.

On the 19th May, 1810, being at sea, James Jackson, aged 32, was brought down to the Sick Bay, senseless, with blood running both from his mouth and nose. On examination, I perceived that the atlas was displaced from the foramen magnum, the corrugator supercilii and occipito-frontalis were wounded, with laborious breathing, rattling in the throat, extremities cold, dilatation of the pupils of the eyes, and slow and interrupted pulse. I was informed that the lower studding-sail-yard and sail, which were hanging up to dry, fell and struck him on the back of the neck, and forced his head against the spars on the booms, where he lost a great deal of blood from his mouth. His wounds were dressed with emp. adhesiv.; the atlas replaced; the bleeding from the mouth stopped as soon as the vena basilica was opened. The quantity of 20 ounces of blood was taken, when I discovered immediately symptoms of relief.

A purge of ten grains of calomel and fifteen of jalap was administered.—18th, Pulse feeble and irregularly intermitting; sensible, but speech inarticulate; the calomel had no effect; complains a great deal of the back part of his head. At half past nine, A. M. vomited about a pint and a half of dark-coloured blood. I immediately gave him some tea, with fifty drops of diluted sulphuric acid, which stopt the hæmorrhage. In the evening a clyster was administered to him, which produced two copious evacuations, and at bed-time a diaphoretic draught. On the 19th, the ship arrived at Spithead, when I sent him to Haslar hospital. During the time of the ship's remaining at Spithead, I went to see him several times, and he was getting better; the dislocation of the atlas had brought on a paralysis of the lower extremities. But, to my great satisfaction, the day before we sailed, I went to see him, and found that he had recovered the power of his limbs sufficiently to walk with the assistance of crutches.

His Majesty's Ship La Hogue, Hollesley Bay,
21st Nov. 1812.

XII.

Case of Torpor of the Primæ Viæ, terminating fatally. By J. Green, Member of the Royal College of Surgeons, London.

October 31, 1812.—I was called to William Wall, ætat. 25, of a hale habit of body. He complained of weakness and lassitude; *pain* in his head, though slight, and loss of appetite; his pulse about 80, and feeble, but regular and soft; his skin hot and dry; tongue moist; and he has had some slight shivering fits. He had been indisposed as much as a fortnight, but did not apply for medical aid, as he said he had never taken a dose of medicine in his life. His bowels had not been open the three preceding days. I took ℥viij of blood from his arm, which had but little appearance of inflammation. He took the following powder:

℞ Hyd. submur.
Pulv. rhei a. gr. v. Statim sumend.

And three spoonfuls of the decoctum nitrosum every three hours. November 1st.—I saw him early in the morning; he was much the same, and had had no evacuation. I gave him the following;

℞ Hyd. submur.
Pulv. rhei a. gr. v.
Pulv. antim. gr. ij. ft. pil.

and he had an opening draught to take in the course of an hour and a half after the pill. 2d.—I saw him; he had had no stool; complains of his head being heavy, and is thirsty. Continue the fever julep, with the following:

℞ Mag. vitriol, ℥iss.
Aq. bullientis ℥viij. ft. solutio.
Capt. cochl. iij. larg. qq. 2da hora.

Has a soap-glyster given him, which is to be repeated if necessary; has a blister applied to the back of his neck; makes but little water, much loaded: and he takes one of the following powders every three hours:

℞ Camph.
Pulv. antimon. a. gr. iv. ft. pulv.

3d.—No stool; has not made a tea-cupful of water during yesterday and last night; complains of his head being heavy; pupils seem natural; pulse 80, soft and regular. Bled him to ℥vj.; had him put in a warm bath for fifteen minutes, which was to be repeated in the evening. He takes the following bolus:

℞ Hyd. submur. gr. v.
Antim. tart. gr. ¼.
Cons. q. s. ft. bol. to be repeated in three hours; takes the solutio mag. vitriol.; drinks cooling demulcent drinks frequently; has a soap-glyster given him every three hours, thrown up with a quart-syringe that has a long pipe to it. 4th.—No stool; no sickness; headache less; pulse 80, and soft; skin dry. Continue the enemas, fever-julep, and opening mixture; warm-bath repeated. Takes the following:

℞ Hyd. submur. gr. v.
Pulv. gum. gamb.
Pulv. jalap. a. gr. x. ft. pulv. Statim sumend. et repet. qq. 4ta hora.

5th.—No stool or water; no pain but of the head, of which he does not complain but when asked; is become a little deaf; skin hot and dry; pulse increased to 90, feeble and small; had him out of the warm bath, and dashed cold water on the abdomen; it produced an inclination for stool, but effected nothing. Bled him from the temporal artery to about ℥v. I gave him ℥iij. ol. ricini. I almost despair of procuring stools, for both stomach and intestines seem to have lost their tone, as the quantity of medicine he has taken produces neither sickness nor purging.

ing. He says he is so sore he cannot bear to have any more glysters given him. He takes the following:

℞ Pulv. jalap.
Potassæ tartrat. a. ʒij.
Syr. rhamni ℥j.
Aq font. ℥v. M. ft. mist. capt. cochl. larg. iij qq. 2da hora.

6th.—Says he is much relieved by the bleeding from the temple. Pulse 80, fuller and soft. Deafness continues; pupils natural, but complains he cannot see perfectly, although he has never complained much of his head. He says he is so much better that he now expects he is going to get well; says he could work but that he is so weak. Takes the powders of gamboge, jalap, and calomel, every three hours. Gave him a soap-glyster, with ʒij. powdered ginger in it. In the evening gave him an emetic, which produced no effects. 7th.—Complains of a pain in his abdomen; not increased on pressure. His pulse 80, soft and feeble. I, however, took ℥iv. more blood from the temporal artery, and then gave ℥iv. of quicksilver. He has his spine rubbed all the way down with a stimulant embrocation. The blister on his neck I have kept running. 8th.—Complains of his jaw being a little stiff, I suppose from the calomel. He takes now,

℞ Gum. gamb.
Jalap. a. gr. x.
Pulv. antim. gr. ij. ft. pulv. sumat. qq. 2da hora, purgat. mist. optio ℥vj.

9th.—No evacuation; no water; no tension of the abdomen. Has had no inclination for food throughout his illness; his skin, for the first time, is become moist; his pulse soft, and about 75. Having read of a man by mistake drinking ℥iv. of the spts. terebinth. with its only occasioning excessive vomiting and purging, considering this a forlorn case, and myself justified in giving him any thing, I gave him the following mixture:

℞ Mellis ℥ss.
Pulv. gum. acacia, ℥ss.
Spr. tereb. ℥ij.
Aq. font. ℥ij. M. ft mist. capt. cochl. mag. a qq. 4ta hora.

10th.- There has been some watery discharge by stool, amongst which was voided a worm eleven inches long, and, in the course of the night, another nine inches long. Omit all medicines. 11th.—Complains of his head when asked; at other times is perfectly regardless of every thing, and all persons about him, with some low muttering delirium. Pupils not dilated, but sensible of the stimulus of light. I applied eight leeches to the temples, and a blister to the head. 12th.—A little relieved from the leeches. I took ℥iv. of blood from the arm. His mouth is dry and parched, and he takes saline draughts. 13th.—Subsultus tendinum come on; lies seemingly insensible, but answers when spoken to. Has a laudanum embrocation rubbed on the stomach. 14th.—Subsultus tendinum abates when the embrocation is used. 15th.—Picks at the bed-clothes, and frequently puts his hand to his blistered head. 16th.—Apply four more leeches to his temples. 17th.—Lies insensible. 18th.—Died at six o'clock in the morning, with but little struggling.

I am sorry I was not allowed to open this body after death, and examine the cause of his death. From hypothesis alone I should imagine the brain to be the sole cause of his complaint, and, from his being a young man, fond of his prowess in the neighbourhood, and having, just before his illness came on, been much engaged in wrestling, I am inclined to conclude, that, from a fall, he might have occasioned the rupture of a small blood-vessel in the brain, which, constantly pouring out its contents, destroyed the functions of the brain, and accounts for the torpor of the stomach and alimentary canal, as well as for his deafness and imperfect vision.

He took 72 grains of calomel, ʒij. Gamboge, ℥iij. Ol. ricini, ℥i. Jalap. ℥iv. Mag. vitriol. and ℥iv. Quicksilver.

Wenlock, 13*th February* 1813.

XIII.

Observations on the Advantages arising, in some cases, by bringing on Premature Labour. By William Sankey, Surgeon at Wingham in Kent.

Although it is many years since the safety and necessity of bringing on premature labour have been established, very little has been published upon the subject. The only accounts I have met with, are Dr Denman's excellent observations in his introduction to the Practice of Midwifery; and some cases recorded by Mr Barlow of Bolton, in Lancashire, in Dr Simmons's Medical Facts; and in the Medical and Physical Journal for May 1803. Both those gentlemen have plainly proved, that it is a practice attended

tended with so little hazard to the life of the mother, and not of necessity dangerous to the child, that we must be convinced, that it is an operation which ought to supersede the use of the crotchet in every case, when we have a previous knowledge of the size of the pelvis; but this is seldom known till a woman has had one difficult labour: and there is something so repugnant in the operation, that no medical man can feel justified in performing it, till the necessity is apparent to his patient and her friends.

The following cases perhaps may not so much prove the necessity, as the safety; particularly as two of the women had been delivered of live children, but with so much difficulty and danger, that I was induced, at their earnest request, to bring on labour, when they were supposed to be about the eighth month of their pregnancy.

Mrs Weeks, a healthy young woman, in her first labour, was delivered, by the assistance of the crotchet, after opening the head of the child.

The second time, the child was expelled, after a long and severe labour, with the assistance of the lever: but the child was dead born. The head was so much injured by the narrowness of the pelvis, that there appeared but little chance of bringing a full grown fœtus into the world alive. About a year after, when I supposed she had nearly completed her 8th month, I brought on labour: the child was expelled alive, after a very easy labour of less than half an hour; but it died the next day. Upon reconsidering this case, I supposed I had brought on labour before the 7th month; consequently, though perfectly safe for the mother, it was too soon for the child.

The next time, I delayed bringing on labour, till, by her own account, she had nearly completed nine months; but probably it was nearer eight, for, in her two former pregnancies, she supposed she had nearly completed ten months before labour came on. The labour now was not so quick or so easy as before, but, in less than three hours moderate pain, she was delivered of a fine healthy child. Her two first labours were followed by long and severe illness; from the two last, she recovered without any. This woman did not become pregnant again.

Mrs Sayer had been delivered of six children by my predecessors; her labours were all very long and severe; instruments were used every time. In the second, it was thought necessary to open the head; the others were all born alive. Her labours generally continued three or four days, and her recovery several times was tedious and doubtful. In her last pregnancy, when I supposed she had completed the eighth month, I brought on labour;

after two or three hours moderate pain, she was delivered of a healthy child. This woman recovered without any illness.

Mrs Wellard had been attended in her four first labours, by my predecessors at Wingham. The first time, after suffering nearly four days, it was thought proper to open the head of the child. The second time, after a very severe and tedious labour, she was delivered of a living child, with the assistance of the lever or forceps. The third labour was also long and severe, and assisted with instruments. In the fourth, it was again thought proper to open the head. All those labours were followed by more or less illness, and her recovery was always slow.

The fifth time, I brought on labour at the end of eight months. After two or three hours moderate pain, she was delivered of a healthy child.

In the sixth pregnancy, I did the same. The child was larger, and a breech presentation; of course the labour was more severe; but in eight or nine hours, the child was expelled alive and healthy.

The seventh time, I again brought on labour at the same period, and this child was expelled alive in a few hours: The mother recovering every time without fever or any illness of importance.

The above cases are all I have attended. The event, in all of them, has fully justified the practice, as far as regards the safety both to the mother and the child. Whether it was absolutely necessary, cannot perhaps be decided. The children were all born alive. The women all recovered without accident. In their former labours, they had recovered slowly and with difficulty. Neither of these women were distorted; the difficulty seemed to arise from a flatness of the sacrum. In Mrs Weeks, it was particulary so; if it had any curve, it projected inwards, instead of outwards, and so perfectly even, that there was nothing gained on one side by being lost on the other; which often enables very distorted women to have easy labours.

It has generally been about three days after the evacuation of the water, that labour has come on; but in Mrs Sayer's case, it was fourteen or fifteen. During that time, she felt no uneasiness excepting in her mind. In some cases, the operation is easily performed; but in most of these, the mouth of the uterus was so high, that I had some trouble to accomplish it.

Wingham, Jan. 6, 1813.

XIV.

XIV.

Pathological and Practical Observations.

While we await the accomplishment of some comprehensive reform of medical science, such as the enlarged mind of Cabanis has conceived, and his interesting work forms so excellent an introduction to, it must still be the duty of individual practitioners, to observe with accuracy, and record with truth and perspicuity, all such phenomena of health and disease as may have particularly attracted their attention, or which may have possessed any marked influence in directing them to a more certain and effectual practice in the cure of diseases.

The establishment of all the laws by which health and disease are governed, by means of an induction from the store of facts and observations with which medical records abound, regulated by those philosophical methods which experience has shewn to be most beneficial in improving physical science, is doubtless a grand and sublime conception, and, when realized, must impart correspondent advantages to science and humanity. In the meantime, however, it is consolatory to reflect, that whatever certainty the art of medicine possesses, and whatever sure and steady lights exist to guide the medical practitioner in the obscurities which surround him, have been derived rather from the industry with which individual observers have traced the course of morbid actions, and the operations of nature in producing these, than from any combined exercise of talent employed in selecting, comparing, and drawing conclusions from the facts and observations previously accumulated. This remark, if true, should lead us not to undervalue the means of improvement we are possessed of, and which every one may employ, in contemplating those grander schemes, which are rather desirable than practicable or likely of attainment. Nor are the results of individual observation, although derived from data which, compared with the accumulated materials supplied by general contribution, must seem limited indeed, undeserving of confidence; provided the particular facts have been carefully noted, and the general truths deduced from them fairly inferred, without bias from preconceived theory, or any hollow aid from hypothesis. The individual observer, in drawing conclusions from his own observations, may even be considered as possessing some peculiar advantages; for he escapes the error of misunderstanding the terms by which his facts may be expressed; and if he is cautious only to observe with clearness, and to reason with precision, the establishment of useful truths must be the consequence. In order, however, to render his labours in this respect really useful, it seems essential that the objects worthy of research, and the means of attaining them, should be clearly understood; for if,—instead of fixing on the operations of nature, in regulating the movements of a complex machine, as the end to which his attention should be stedfastly directed, or of patiently investigating the series and connection of morbid actions which constitute disease,—he seeks to simplify beyond nature, and to grasp at some imaginary principles, exercising as it were a despotic power over all the animal actions, and by the possession of which he may effectually control them; he then deserts the path of reason and sound philosophy; becomes bewildered in the images of visionary conjecture; and leaves to posterity only vain regrets, for expectations disappointed, and talents misapplied.

That any principle of this extent should ever have been sought after, or assumed by men accustomed to observe closely the operations of nature, may well excite our surprise, for the absurdity of supposing that any such existed may be readily exposed. From the history of man, considered with relation to his species, or of the human race, as forming a part of the animal creation, certain general laws may doubtless be inferred, to whose influence they are unconsciously subservient. But such can have little application to the internal mechanism of the individual; nor can they prove at all adequate to instructing us how to repair this when its structure or function have become deranged. As well might we attempt to apply the laws of gravity, by which this globe is upheld in the planetary system, to the explanation of all the movements that are continually taking place on its surface, or within it; as well expect to rectify, by aid of the same simple principle, the complicated mechanism of a spinning-jenny, or steam-engine. In these, no doubt, the principle of gravity exerts a certain and extensive influence; but many others are also operating, and each of these requires to be minutely investigated ere the nature of the whole can be thoroughly understood. It is precisely the same with respect to the human frame; for though certain general laws seem to influence its collective powers; as, for instance, the law which defines and explains the effects of excitement on the excitability or sensorial powers,—we are, nevertheless, under the necessity of minutely investigating all the movements which are going forward within it; of ascertaining their natural connection with and influence upon each other; and of tracing back, to the earliest deviations from a state of health, those morbid actions to which, when arrived to a certain height, we give the name of disease. It is, indeed, only by such close and scrutinizing observation of the operations of nature, that we can ever hope to acquire a perfect knowledge of her proceedings; or to arrive at fixed and unerring principles of pathology, so necessary for enabling us to apply, with confidence and precision, suitable treatment to all the varied forms in which disease is presented to us. The superiority of a practice so regulated, over such as merely applies to a given set of symptoms, the treatment which had been previously found successful, under apparently similar circumstances, will be readily admitted by all who have become familiar with the difficulties of actual practice, who have perceived how manifold are the disordered conditions of the human frame, which admit not of reference to any nosological character; and how frequently the best defined diseases baffle the power of those very remedies which are almost deemed specific, until a minute investigation of all the morbid actions that are going forward points out the parts more particularly suffering, and thus directs the application of remedies to where they are most required. That this mode of investigating and treating diseases is familiar to a great proportion of medical practitioners I have no doubt. It is that which experience and reflection must speedily force upon their adoption. Nor do I offer the foregoing opinions as possessing novelty; neither arrogate to myself any merit for discovering what lies so completely on the surface. The doctrines, however, are not so universally taught or acknowledged as to render occasional expositious of this kind superfluous. And, if I mistake not, there are even, at the present day, many among medical practitioners, who, for want of such timely warning, have entered on medical practice with overweening confidence in their own powers of giving relief, with delusive expectations, that nature would, in every instance observe the course which nosologists had marked out for her; and who, in consequence of the repeated disappointments, which such views and expectations rendered inevitable, are almost prepared to avow, as a celebrated physician is said once to have done, that though, in early life, they believed that, for each disease, they possessed many remedies, they have on the contrary found many diseases for which they have no remedy at all. Diseases of this latter character, however, I am sanguine enough to believe, are but rare; for in proportion as my acquaintance with the real nature of disease increases, so does my belief in the power and efficacy of medical treatment become extended and confirmed. By this latter term, however, I must not be misunderstood, as implying that, by the mere exhibition of drugs, we can cure all diseases. On the contrary, I believe that, when restricted to these, we can scarcely cure any. The words must therefore be taken in their most comprehensive meaning, and as including every influence which external agents exert on the constitution of man.

With such views respecting the objects of medical science, and the means of attaining these; and satisfied that, from general pathological principles, must the medical practitioner ever derive his best and surest aid in combating particular diseases; it has hitherto been my endeavour, in the treatment of such, to detect and discover, as far as I was able, the series and connection of morbid actions, so as if possible to trace them back to the earliest deviations from a state of health; distinguishing those symptoms which arose in regular succession, and were dependent on the original cause of disorder, from such as occurred incidentally, and by reason of that sympathy or unexplained sensibility, which certain organs are notoriously endued with for each other. Some of the results of this mode of investigation it is my intention, in the course of this Essay to detail; and I trust the evidences afforded by them will be found so clear and conclusive, as to leave no doubt respecting the accuracy of the reasonings which gave rise to them. The more immediate purpose, however, of this communication, is to state some general pathological facts, which I consider of importance, and to present some views of the animal economy, such as experience and observation have taught me to believe are accurate and just. How far I may be justified for thus obtruding them on the attention of medical men, I am not prepared to say. They will no doubt be differently regarded, as different habits and different theories may influence those who take them into consideration. Some may deem them so obvious as to merit the reproach, not unfrequently cast upon medical treatises, of affecting to instruct on points whereon the profession were already sufficiently informed, while by others they may be controverted, and their truth denied. In neither case, however, shall I repent of having submitted them to the profession; for, if already received and established, no injury can arise from my additional testimony being given in their favour; while, in giving rise to discussion, it is equally clear, that nothing but good can result from those investigations, and that closer observation of morbid phenomena, without which they can neither be confirmed nor disproved.

Preparatory to an investigation of morbid actions, of the phenomena they present, or the diseases they give rise to, it may contribute to give us clearer ideas respecting their origin and progress, previously to review those several functions which are continually performing within the animal frame, by which its life is supported, and its health and well-being preserved. In doing so, however, it is not my intention to recapitulate all that physiological inquirers have conceived or ascertained respecting the functions of animal life; but merely to advert to some of the most obvious and important of them, in order to distinguish between such as are solely employed in regulating its internal economy, from those which form the connecting links between it and the external world, by taking in, and elaborating, for the purposes of life, such extraneous matter as is required for its support. Nor ought such distinction be deemed frivolous; for if it shall appear, as I trust it will, that those latter functions are more peculiarly liable to irregular impressions, and the constitution more readily assailable through them, it must tend to impart a higher authority to, and juster confidence in those results, which, derived from an attentive examination of natural phenomena, pronounce the first elements of disease to be traceable to, and discoverable, precisely where reason and an unbiassed consideration of Nature's proceedings would, *a priori*, assign their first existence.

The animal frame is supported by aliment taken into the stomach, where it undergoes the first process of digestion. Experiments, the most conclusive, have shewn that this is chiefly dependent on a fluid secreted within the stomach, and possessed of extraordinary solvent powers, such as no chemical analysis can account for or explain.

Thus prepared, it passes into the intestines, where it meets with other fluids, whose influence has not been accurately ascertained. As it is carried slowly through this long and tortuous canal, the patulous mouths of innumerable absorbent vessels, everywhere opening on its surface, take up the more nutritious particles, which they convey, under the form of a milk-like fluid, called chyle, into the circulation, near to where the refluent blood of the body is carried back to the heart.

The organs of digestion, therefore, form one important link of connection between the animal frame and external existences, and the effect of irregularity in their functions must be immediately experienced in that system of vessels to which the produce of their labours is directly conveyed. If they are defective, either from insufficiency of nutriment, or impaired disgestive powers, consequent to any local disability of these organs, a correspondent deficiency must exist in the chyle, conveyed into the circulation; the blood must thence be inadequately renewed, having no other source of supply; the several secretions be proportionally affected by its diminished quantity, and necessarily altered quality; and emaciation and disease ensue.

This however, is an effect which we rarely witness, for so moderate is the quantity of food really necessary for the support of human existence, that emaciation or disease from actual deficiency of food is rarely exemplified. From some extreme cases, however, we are occasionally informed of the effects resulting from want of sustenance, and are enabled to ascertain, that, even under extreme inanition, life is long preserved. As striking an instance of this nature as any perhaps on record, is that afforded us by the narrative of Captain Bligh, of his Majesty's ship the Bounty, which was sent in 1788, on a voyage to the South Seas, with the intent of transporting the bread-fruit tree from thence to our West Indian Islands. Shortly after leaving Otaheite, Captain Bligh was committed by a mutinous crew to an open boat, together with 18 companions, all of whom providentially arrived at the Island of Timor, in the Indian ocean; having traversed, in 41 days, a distance of 3618 miles, under circumstances of such aggravated distress, arising from wet, cold, fatigue, and inanition, as must abundantly prove the powers possessed by the human body of sustaining hardships of this nature; and establish, beyond a doubt, the fact, that reduction of food does not tend to impair health, or reduce strength to such an extent, as the prevailing prejudices on this head would lead us to suppose.

A more direct and satisfactory evidence, however, of the truth of the position, is that perhaps which offers itself to those who will turn from the enfeebled sons of fashion and dissipation, to contemplate the hardy race of peasantry, which both Scotland and Ireland produce; and which will be allowed to be as robust, and as capable of laborious exertion as the people of any other country whatever; while their simple fare is never taken beyond the limits of natural unprovoked appetite, and is rarely enriched by those invigorating powers which animal diet is supposed to be so peculiarly endowed with. I mean not, however, by any means, to imply that this latter opinion is founded wholly in error. On the contrary, I freely admit that a mixed diet of animal and vegetable food is that which is best suited to the nature and constitution of man, and from which, when moderately taken, and when disease is not present, he must ever derive his best support. I would argue only against the abuses which a misapplication of the simple fact, that animal food is the most nutritive, has extended and perpetuated, by shewing, that as health and strength are perfectly compatible with a spare and vegetable diet, (while, as must be sufficiently obvious, to the observers of fashionable life, they do not always ensue from rich and luxurious fare,) we are warranted in concluding, that although an admixture of animal food may be, and no doubt is, conducive to imparting animal strength,—yet that we have no ground for believing the degree of strength to be at all proportional to the quantity of animal food devoured, or the frequency with which it is taken; but that, on the contrary, when taken beyond its due proportion, or that which the degree of bodily exertion renders necessary, we have every reason for pronouncing it capable of producing directly opposite effects.

These few and simple considerations must render it probable, at least, that few of the diseases which afflict human nature are attributable to a want of nutrition, or a deficiency of that fluid into which all nutriment is converted by animal assimilation, and might, if duly reflected on, tend to shake those prejudices which so frequently impede the medical practitioner in the performance of his duty. How often, when he has traced, by means of the clearest evidence and justest reasoning, the cause and origin of disease to an undue fulness of blood-vessels, overloading the system, and either oppressing its powers, or else exciting it to throw off, by some extraordinary effort, the burden which oppresses it, is he arrested, in the outset of his proceedings, by the terrors and false reasonings of the patients or their friends, who are ever ready to exclaim, especially if any spareness of habit exists to give a colour to their alarms, that there is more necessity for transfusing blood into the object of their concern, than for taking any away? Nay, even when the plump and bloated aspect of the sufferer loudly proclaim the excesses by which his pampered body has acquired its unnatural exuberance, and under the very torments inflicted by those maladies which have directly flowed from habitual and unrestrained indulgence, is the medical adviser too often assailed by solicitations to relinquish or postpone the measures his reason and his conscience enjoin him to employ; and, instead thereof, to allow a little wine and nourishment, which, it is said, the patient's state of debility so obviously requires, were it only to enable him to bear the desperate measures which the doctor has the cruelty to propose and insist on! By such senseless jargon has the better purpose of the practitioner been too often overruled, and manya valuable life sacrificed to vain terrors and ignorant pertinacity. That these are not imaginary pictures, but representations accurately delineated from real life, will be admitted by those practitioners who are not wedded to a cordial and stimulant practice in the cure of diseases, for they must oftentimes have encountered such. How much the existence of such prejudices must tend to confirm and render inveterate individual diseases, must be manifest. They must also retard, by a powerful influence, the progress of medical science and the improvement of medical practice; for how can advancement towards perfection take place, under a system which applies to the removal of diseases the very means by which they have been engendered; or how can the natural powers of the constitution, in regulating and assisting which the chief business of the physician should consist, be successfully investigated by men, the majority of whom are almost constantly engaged in contemplating processes in which the course of nature is perverted, and her efforts counteracted or repressed? These reflections at present are rather premature, but they are not unsuited to the subject with which I have connected them; and as I write to men acquainted with all those ulterior animal processes, which are yet to be noticed, no obscurity can attend this early introduction of them. When I shall have completed the views which I mean to take of the animal economy, and have extended them to those morbid conditions to which I wish to direct attention, I shall have occasion to resume this subject, and further enforce the arguments I have been now advancing. One motive with me for thus early presenting them to view, is, to vindicate the objects and purposes for which the present essay is designed; for as prejudices, such as I have been illustrating and deploring, can never be thoroughly corrected, unless by an uniformity of sentiment and of practice among medical men,—and as this can only result from concurrent convictions induced in their minds, respecting the nature and causes of diseases, and the means suited to their removal, too much zeal, or too earnest endeavours, can hardly be devoted to accomplishing so desirable a consummation. To a sense of duty, therefore, and of the benefits which would result from a greater congruity of sentiment among medical practitioners, do I yield, in thus offering my mite towards those contributions to medical science, which all its votaries are bound to present, and which, if freely afforded by all who are capable of imparting valuable information, would soon constitute such a body of evidence, in favour of rational practice, as must outweigh all the delusions of sophistry, or the apprehensions of weakness; and effectually humble the pretensions, and counteract the selfish venality of ignorance, quackery, and conceit.

I now return to the physiological discussion from which this digression has too long detained me.

Inanition occasionally arises, in an extreme degree, from causes affecting the recipient organs, as in cases of dysphagia, from contracted œsophagus,—and in these we have the opportunity of daily noting the progress of declination under diminished nutrition, until a total incapability of receiving even liquid nutriment into the stomach, terminates all chance of prolonging existence;

for though endeavours have been zealously made to sustain life by absorption from the skin and lower intestines, still the success has been of such short duration, as almost to render it questionable, whether any real sustenance was thus afforded; while the failure of the attempt fully establishes the fact, that by no means can life be long preserved, save by aliment digested in the stomach, and conveyed by the lacteals into the course of circulation.

A further cause of inanition may be traced, perhaps, to certain morbid conditions of the stomach itself, when, by abuse of stimulants, or other causes, its tone becomes enfeebled, and its secretions diseased. Cases bearing this aspect, however, are not unfrequently of a complicated nature, requiring to be unravelled, and each function separately examined, in order to ascertain whether the emaciation is attributable to impaired energies of the stomach and imperfect digestion, or to an overloaded state of blood-vessels, indisposing them to the exercise of their nutritive faculties, and exciting them rather to efforts generative of disease. In the former cases, we find deficient appetite, languid inactive bowels, a moderate circulation, and valetudinary state of health, rarely interrupted by inflammatory attacks, and seldom terminating in either palsy or gout. In the latter, the appetite is good, often inordinate; and this voracity for food, so inconsistent with the appearance of the spare and fleshless being who devours it, affords a melancholy illustration of some of the preceding arguments. In these, plethora and strong arterial action will generally be found co-existing. Local determinations of blood, too, may be detected as the causes of much bodily distress, while rheumatism, palsy, or gout, inflict the well-merited pains incurred by sensual indulgence, and finally terminate a career, which, if the prolongation of life were dependant on the richness or quantity of the nutriment taken, should be entitled to a much longer continuance.

(To be continued.)

XV.

Some Observations in reply to Dr Edward Percival, on the subject of the Poison of Mercury. By THOMAS BATEMAN, M.D. &c.

WHATEVER opinion might be entertained, respecting the cases related in my Report from the Dispensary, which have obtained the honour of Dr Percival's notice, in the last number of this Journal, I must confess that I least of all expected to find the exciting *cause*, to which I ascribed the diseases, considered as problematical. I thought, with Ramazzini, that the direful influence of the poison of *mercury* on the human economy was universally known, and admitted; "Quas diras labes ex *mercurio* referant Aurifices, qui potissimum in deaurandis argenteis et æneis operibus occupati sunt, nemo non novit;" (Ramazzini de Morbis Artific. cap. 2.) and did not, therefore, deem it necessary to adduce a great store of evidence and authority, in support of that statement. But as Dr Percival has represented this as a speculation, into which, he thinks, I was misled by overlooking a common-place fact in the history of Colica Pictonum, I feel myself called upon to state at greater length the grounds of this opinion. In the course of this statement, it will probably appear, that Dr Percival's scepticism is founded upon hypothetical grounds, deduced from a single anomalous case; that he has overlooked a great mass of recorded evidence which stands in opposition to his opinion; that he has misconceived the nature of the process, by which artificers are most commonly injured by mercury; and that he has stated somewhat incorrectly the analogies between my cases and his own.

In the first place, the case which he relates, though doubtless the result of the poison of lead, is by no means an example of the ordinary effects of that mineral. I have had occasion to treat a large number of patients at the Dispensary, during the last eleven years, suffering from the colic and the palsy which this poison induces, and have witnessed a remarkable uniformity in the paralytic affection which ensues; namely, a simple loss of power, with some diminution of bulk, in the extensor muscles of the fore-arm, and the consequent dropping of the hand. But in ninety-nine cases of a hundred, no tremors, no spasmodic twitches, no difficulty of articulation, no affection of the lower extremities, or of the muscles of other parts, has appeared. So far, therefore, from being a legitimate generalization, Dr Percival's opinion is somewhat in opposition to such a process.

Let us observe, in the next place, how extensive the evidence is in favour of the deleterious operation of mercury, (not in amalgamation with lead, but in a state of vapour, of oxidation in ointment, &c.), and especially in producing the tremors, and other spasmodic affections, which I have ascribed to it.

The older chemists, or rather Galenists, contended that mercury was *humid* in the last degree, because, among other resolvent properties, " nervos omnes et articulos adeo relaxet et debilitet, ut omnem fluxionem facile admittant, suscitenturque *tremores immedicabiles*."

dicabiles [*].” The author just quoted, has traced this paralyzing power of mercury in all the modes of its employment. It was at one period supposed to be the effect of the venereal poison, and not of the mercury employed for the cure of that malady. But, says Fernel, “Tremore videntur corripi, non Lue modo contaminati, sed alii fere omnes exquisitè sani, quicunque *argentum vivum* in puteis legunt, vel minium [†] effodiunt, vel ex eo hydrargyrum, et hinc, addito sulphure, cinnabarim decoquunt; vel qui inaurando, vel *alio quovis modo venenatum* argenti vivi *vaporem*, aut *cinnabaris*, ejus sobolis, *suffitum*, ore naribusque exceperint. Tremunt etiam iis manus, qui Lue venereâ affectos unguento ex hydrargyro sæpius inunxerunt;—&c.” He then relates the following case of a gilder. “Non ita pridem inauratorem quendam invisi, hominem alioqui robustum et quadratum, cui *hydrargyri vapore* ita cerebrum *totumque genus nervosum* repente affectum est; ut non modo *brachia et tibiæ vehementer illi tremerent*; sed *ne stare quidem*, aut *incedere*, aut attonitum caput et tremulum attollere posset. Hic curatus standi et incedendi vires paulatim recuperavit; verum cerebrum illi grave torpidumque remansit, et rheumatismis obnoxium.” He adds, “*Occurrunt quotidie* et alia ejus generis symptomata, quorum animadversione intelligere est, vim summam inesse hydrargyro, refrigerandi, laxandi, et molliendi, idque *cerebro*, *nervis*, *tendonibus*, membranisque omnibus in primis perniciosum esse.” Etmuller has noticed the effects of mercury on the nervous system, when administered for the purpose of producing ptyalism. “Nota: Fit sæpiuscule ut ii qui mercurio pro salivatione usi sunt, *tremuli*, *epileptici*, vel *apoplectici* fiant [‡].”

But the testimony of Ramazzini, in his excellent treatise “de Morbis Artificum,” is most ample and decisive. After writing the sentence already quoted, he goes on to state, that the gilders, “who use mercury in the way of amalgam with gold, and afterwards drive it off by heat, notwithstanding all their caution in turning away the face, cannot avoid inspiring some of the deleterious vapours; whence this class of artificers very soon become vertiginous, asthmatic, paralytic, and of a cadaverous appearance. Very few of them grow old in these manufactories; and if they are not speedily cut off, yet they are thrown into such a deplorable state, that death is actually desirable to them. Their hands and necks become tremulous, their teeth fall out, their legs vacillate, &c.*" He then refers to the case above related from Fernelius; to another described by Forestus, "de Aurifabro, qui, ob mercurii fumos incaute exceptos, factus est paralyticus;" and to a third mentioned by Olaus Borrichius. But, he concludes, "nimius essem, si historias omnes hujus generis quæ apud medicos scriptores exstant, hic recensere vellem. Satis enim frequentes sunt hujusmodi casus, in magnis præsertim civitatibus, et nostra hac ætate, in qua nihil cultum, nihil satis elegans videtur, nisi auro splendescat; adeo ut in magnatum domibus *matulæ* et *egestoriæ sellæ* deauratæ spectentur, cariusque *egeratur* quam *bibatur*, ut olim de quodam lusit Martialis."—He enters into an explanation of the peculiarly noxious influence of mercury in a state of vapour, which he ascribes to the tenuity of its parts, and the consequent facility of its entrance into the different passages and cavities of the body †.

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[*] See Fernel, de Lue Vener. Curat. cap. 7.

[†] It is to be recollected that *minium* was native cinnabar, and not an ore of lead. Thus Agricola, de Nat. Fossil, lib. ix. “At officinæ argenti vivi dant minii factitii genus, dant minium, quorum utrumque hodie cinnabaris nominatur.” See also Plinii Nat. Hist. lib. xxxiii. cap. 7.

[‡] Etmuller de Regno Minerali, cap. xi.

In his seventh chapter, "de Vitriariorum, et Speculariorum Morbis," he describes the same morbid effects of mercury upon the Venetian artificers employed in silvering mirrors; the occupation in which my patients were employed. I need not again refer to the invariable shortening of life among the miners of Friuli, who are first seized with spasmodic tremors, and afterwards become hectic; nor to the other testimonies stated in my Report.

If this recorded evidence be not deemed sufficient to establish the fact, we may appeal to the daily experience of our button-makers, watch-gilders, and similar artisans. I am informed by an eminent watch-maker, that the case-gilders are almost invariably sickly and short-lived, if they do not early desist from their business, which never fails to produce the effects above described on the nervous system. And a large button-manufacturer states, that, from the mere impregnation of the habit by the mercurial *vapours*, he has formerly seen his workmen so mercurialized, that on rubbing a guinea for a few seconds on the arm, it became completely silvered. At present, however, he added, these appearances and the nervous diseases are much less common in the manufactories, in consequence of the introduction

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* Loc. cit. cap. 2.

† The knowledge of the deleterious effects of *mercurial vapours* appears to be of old date among artificers. Pliny says that miners, occupied in procuring cinnabar and argentum vivum, covered their faces with bladders (Loc. cit.); and Kircher states, that they used masks of glass. (Mund. Subter).

tion of a contrivance for carrying off the vapours of the mercury. My friend, Dr Henderson, to whom I am indebted for this information, lately attended a button-maker, who was affected with the spasmodic tremors in his arms to such a degree, that although Dr H. endeavoured to steady them, by pressing them on the bed and on a table, all his attempts to count the pulse were unavailing. The fingers and palms of the hands, in this man, were so thoroughly impregnated and stained by the mercury (in which condition they had been above three years) that Dr Henderson mistook him for a dyer.

Dr Percival, being apparently unacquainted with the process of gilding metals, has been led into a misconception, upon which he founds one of his arguments against my position. After quoting a passage from my report, in which it is affirmed, that such effects of mercury are common, especially in water-gilders, as they are called, and in persons occupied in the mines which produce mercury, he says, "The cases to which he (the Reporter) alludes, are *entirely confined* to miners and manipulators of mercury in its *natural and impure state*, considerably *adulterated with lead*. Now, in the first place, I have shewn above, that the diseases in question are not confined to miners, and to the manipulators in question; but that they have occurred from almost every modification of mercurial impregnation. And, in the second place, the water-gilders not only do not, but such is the nature of the operation, that they cannot employ the mercury in an impure state. The process consists in laying upon the metal, to be gilded, an amalgam of gold and mercury, and in the subsequent application of heat, by which the mercury is vaporized, and driven off, leaving the gold behind. Now, it must be obvious, that as *lead* is not vaporizable by the heat which dispels the mercury, if the amalgam were made with impure and adulterated mercury, the gilding would be injured or destroyed by the admixture of lead, which would remain behind. For the purpose of making this amalgam, therefore, the mercury must be previously purified.

But, in the last place, Dr Percival has somewhat incorrectly stated the analogies between the case which he has described, and those related by me; a single word, of momentous import in the Hamiltonian school, has crept into his inference from these cases, which appears to countenance his view, and to make strongly against mine: but it is not authorized by my detail. I have stated respecting my patient, that "his bowels were constipated, and he complained of much pain in his limbs and loins." In Dr Percival's patient, there were "*frequent* spasms of *colic*, and considerable distress in the lumbar *and umbilical regions*. His bowels were *much* constipated, *hard*, and *distended*, and he had frequently passed *nine or ten days without evacuation.*" But in summing up the evidence, Dr Percival says, " the leading features in common to this and the preceding case, are, constipated bowels, *acute pains* in the lumbar and ABDOMINAL regions, &c." Now, on the contrary, I apprehend, the total absence of these abdominal pains, of this frequent colic, of this hardness and distention of the belly, (so characteristic of the effects of the poison of *lead*,) and the very moderate degree of costiveness, which was present, and yielded to slight laxatives, afford a most material distinction between these cases. In one of the cases under my care, the bowels were regular, as well as in the instance related to me by Dr Henderson.

Dr Percival asserts, in conclusion, that the paralysis, succeeding the painter's colic, " seldom occurs on the first or even second attack of the disorder, but generally results from repeated or long-continued exacerbations of *that* morbid spasmodic condition, which the Reporter and myself have described in each of our cases. I advert to this fact, more particularly" he adds, " as the former, by overlooking it, seems to have been misled materially in some of his pathological speculations." Now, if, by "that morbid spasmodic condition," Dr Percival means the painter's *colic*, I admit the justness of his observation; but then it did not occur in my case, and therefore I cannot have been so misled. But if he means the universal spasmodic subsultus of the muscles which I have described, then I cannot accede to the correctness of the remark, for it is totally inconsistent with my own experience, as well as with the accounts of Colica Pictonum delivered by the best writers whom I have consulted. For, as I have before stated, the palsied and dropping hand, and slightly contracted fingers, unaccompanied by spasm in the upper, or by any affection of the lower extremities, supervene to the saturnine colic with remarkable uniformity.

Soon after Dr Percival's paper reached London, the identical patient, on whose case he animadverts, returned to the Dispensary, after trying the influence of country air for several months. But although he has had no palsy, no colic, (his bowels have been regular and free from all complaint,) the spasmodic tremors are scarcely diminished; and it is to be feared that they are, as Fernel observed, " tremores immedicabiles."

XVI.

Extract of a Letter from William Harty, M. D. *of Dublin, to* Dr Bateman, *relative to the use of Purgatives in Purpura.*

My Dear Sir,—The following detail of his experience, in the treatment of this singular disorder, has been kindly communicated to me by my friend Dr Harty, as a contribution of facts to a chapter on that subject, in my volume now in the press, on cutaneous diseases. As I can there find room only for a brief statement of the results, and as the detail appears to me highly interesting and important, especially as it regards a disease which is yet not perfectly understood, I presume upon his indulgence, and request your insertion of it in the ensuing number of your Journal. Yours very sincerely,

London, February 23, 1813. T. Bateman.

To Dr Duncan, Jun.

Dublin, February 16, 1813.

My experience in purpura has been so limited since I relinquished Dispensary practice, that, after having volunteered a detail of the few practical facts in its history and treatment, with which I am acquainted, I ought now to be ashamed of having so little to offer, and of having delayed that little so long. Not to detain you longer, I shall, without further apology or preliminary matter, proceed at once to the detail itself, which it is my intention to confine to the species simplex et hæmorrhagica.

In 1806 I first met with a case of this disease. It made an impression on my mind not easily effaced; the subject, an unmarried female servant, about thirty years of age, rather corpulent, having, till of late, enjoyed apparent good health. Indigestion and a gnawing pain at the pit of the stomach constituted her chief complaints when first I saw her. In about three weeks petechiæ appeared, soon followed by slight and occasional hæmorrhage. The case, both in its commencement and progress, so closely resembled the very accurate description of purpura hæmorrhagica given by Dr Willan in his Reports, p. 90, that I need not detain you by a long detail of symptoms. Entertaining a high and well-merited respect for Dr Willan's authority, I strictly followed his mode of treatment. The kindness of friends liberally supplied her with nourishing diet and tonics; and, with the advantages of country air, I have reason to believe that all my injunctions were fairly complied with. In vain,—the hæmorrhage became daily more and more profuse and difficult of suppression. After suffering immense losses of blood, from every organ successively, she gradually sunk under the struggle. The fifth month terminated her sufferings. I was refused permission to examine the body after death; a *refusal* I have not yet ceased to regret.

After such a result, so different from that which Dr Willan's history of the disease had led me to expect, you may conceive my alarm at meeting a second case under circumstances still more unfavourable;—the subject a delicate woman, about the same age, worn down by frequent parturition, poor diet, bad air, deficient clothing, want of cleanliness, and confinement to a cold damp ground-floor. The disease set in with a severe attack of cholera: in two days after petechiæ appeared, quickly followed by hæmorrhage from the mouth, nose, and stomach. Convinced of the inefficacy of mere tonics in bad cases, and forcibly impressed by the occurrence of cholera previous to the appearance of petechiæ, and by a recollection of the remarkable pain in the epigastric region which so generally precedes them, I determined, in this case, to direct my whole attention to the state of the abdominal viscera, and accordingly prescribed a brisk purgative of calomel. From the good effect of the first, I directed its repetition for a few successive nights. To my surprise, the hæmorrhage soon ceased, the spots rapidly disappeared, and, in less than ten days, the patient recovered, under every possible disadvantage of constitution, of air, and of diet. Encouraged by the unexpected result of this unpromising case, I now no longer hesitated in employing purgatives, and trusting to them only in both species of the complaint.

My next was also a case of the hæmorrhagic kind,—a boy about three years old, on whose face and body large purple spots appeared, when three weeks convalescent from scarlatina. There was occasional, though not profuse, hæmorrhage from the nose, gums, and fauces. Calomel and jalap were liberally administered for four successive nights. The feces were black like pitch, and highly offensive. After each purgative there was evident improvement. The feces assumed a more healthy appearance, and, by the sixth day, a single spot was not to be traced on the whole body. These are the only cases of purpura hæmorrhagica that have fallen under my care. Of the purpura simplex I have seen about ten cases, all of which readily yielded to the same plan. The most obstinate case was that of a girl of eleven years, on whom the petechiæ appeared without any previous illness, if we except a slight degree of languor and heaviness. The spots were more numerous and more generally diffused than I have witnessed in any other instance; in two days they had reached their acmé, and were then accompanied by headache, quick pulse, and foul tongue, (the only case in which I had seen fever present). It was necessary to purge this patient to a greater extent, and to employ much stronger doses than usual to effect that purpose. The purgatives were continued for eight successive days, at the expiration of which period every symptom of disease had disappeared, and, without the aid of other medicines, the patient was restored to better health than she had hitherto enjoyed. All the cases of purpura simplex were under 15 years of age, and all among the children of the poor. In some, the eruption had continued three or four weeks before purgatives were tried, and in all, the stools were dark-coloured, though not so black as in purpura hæmorrhagica. From my own experience, I can add nothing further on this subject; but I can state, that, having made an early communication to the other physicians of the Dispensary, the practice was adopted by some of them with a success equally marked and rapid. One of them (now no more) employed calomel only. A physician, attached to another Dispensary, informed me of his having successfully employed purgatives in one case, attended with enlarged abdomen, and complaints of pain in it, circumstances which led to the use of that remedy.

Perhaps it may not be amiss to subjoin one or two authorities in support of this mode of treatment in purpura. Heberden, in his Commentaries, under the head of "Purpureæ maculæ," records two cases of this disease occurring in boys, one of four, the other five years of age. "The first of these" (as is stated in the English translation of the work, 1802,) "*immediately* grew better after being gently purged: the other took a decoction of the bark for several days without any manifest good effect*." Hoffman, in speaking of the purpura chronica, calls it "malum molestissimum, difficilis sanationis et quod mire torquere et fatigare solet et medicos et ægros;" but, if you consult his cases, you will observe that many of them are not cases of pure purpura. In his general remarks, he cautions against those things, "quæ alvum adstringunt," and recommends the "iterata alvi solutio," and that the "minera morbi per alvum exturbata sint et ut sordes affatim evacuatæ sint, donec alumæ dejectiones cessarint."

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* On referring to the Latin edition of 1807, it appeared to me not a little singular, that (besides other remarkable differences,) all mention of the first of these two cases should be omitted, and that it should be further said of the second, "Quæ alvum leniter moverunt, videbantur aliquantulum juvare." Can you explain the reason of these omissions and alterations?

Such are the facts and authorities upon which I venture to suggest the efficacy of purgatives in this disease; *facts* which, so far as they are conclusive, evidently refer its origin to a diseased state of the alimentary canal, and viscera connected with it; though I cannot entertain a doubt but that it also not unfrequently arises from, or is connected with, affections of other viscera. This theory of the origin of purpura is, in some degree, supported by many of the cases recorded by Eugalenus and Lyster. On referring to them, you will find that cholera, diarrhœa, or indigestion, had preceded the attack in several instances. The theory itself is thus distinctly given by Hoffman: "Si alvus diutius officii obliviscitur, cohibita ad habitum corporis vergunt purgamenta, biliosæ mucosæ et fermentescibiles scoriæ, quæ per hepar, pancreas et glandulosas intestinorum tunicas separari alvoque debebant ejici, ad cutis colatorium convertuntur, vel in longo illo et anfractuoso intestinorum canali collectæ et invicem commixtæ, morâ magis corrumpuntur et postea ad sanguinem cum succis chylosis et alimentosis advectæ, *liberale morbi et materiæ morbificæ pabulum ac nutrimentum præbent. Quare* nisi alvina cum aliis excretionibus revocentur et *in ordinem redigantur*, ipse morbus rarius perfecte sanescit, sed aut crebrius recrudescit, aut diutius extrahitur." It would also appear, from the observations of Burserius, that Strack (whom I have not read) supposes petechiæ to originate from vitiated bile in the primæ viæ, and from a tenacious mucus adhering to the intestines, and that he accordingly proposed strong cathartics as the proper remedy for the disease, though Burserius by no means agrees with him in opinion; but his remarks are evidently more directed to petechial fever than to petechiæ sine febre. I have even carried this theory further, and have, not without advantage, allowed it to influence my practice in typhus when petechiæ are present; for, though we have here been long in the habit of free purgation in fever, I have had reason to think that mode of treatment *peculiarly* indicated by the presence of petechiæ; inasmuch as many very desperate cases have appeared to me to owe their recovery, almost from the jaws of death, to the powerful and repeated interposition of purgatives, while the strength was at the same time supported by wine. In these cases the motions were always either black or dark-coloured. On this topic I shall not longer dwell, as I hope to illustrate the position in my Reports on the Diseases of Dublin, which may probably see the light before the close of the year, the term prescribed in the poet's advice to authors having now almost expired. Believe me most truly yours,

W. Harty.

MEDICAL

MEDICAL EXTRACTS. No. X.

Further Experiments and Observations on the Influence of the Brain on the Generation of Animal Heat. By B. C. Brodie, Esq. F.R.S. *From the Philosophical Transactions.*

To the ingenuity of Mr Brodie we were indebted, on a former occasion, for a highly interesting series of extracts. The present short paper is the result of his continued attention to the same subject, and also contains facts well worthy of being recorded as essential in all future inquiries into the production of animal heat. Having ascertained, that, when the functions of the brain are suspended, the power of generating animal heat is also suspended, although, by means of artificial respiration, the mechanical phenomena of circulation are maintained, Mr Brodie proceeded to inquire, whether, in these circumstances, the chemical phenomena of respiration continued unimpaired, whether, in a given time, an equal quantity of oxygen was consumed, and an equal quantity of carbonic acid formed.

From three experiments on rabbits, it appears that they consume about their own bulk of oxygen gas in an hour.

In four other experiments with rabbits, in which the functions of the brain were suspended, or destroyed, by dividing the spinal marrow, or inoculating them with woorara poison, the consumption of oxygen, and the formation of carbonic acid, by artificial respiration, were equally great, and yet the heat of the animals fell rather more rapidly than that of others in which the functions of the brain were also destroyed, but allowed to lie dead without artificial respiration.

"From the precautions with which these experiments were made, I am induced to hope that there can be no material error in their results. They appear to warrant the conclusion, that in an animal in which the brain has ceased to exercise its functions, although respiration continues to be performed, and the circulation of the blood is kept up to the natural standard, although the usual changes in the sensible qualities of the blood take place in the two capillary systems, and the same quantity of carbonic acid is formed as under ordinary circumstances; no heat is generated, and (in consequence of the cold air thrown into the lungs) the animal cools more rapidly than one which is actually dead.

"It is a circumstance deserving of notice, that so large a quantity of air should be consumed by the blood passing through the lungs, when the functions of the brain, and those of the organs dependant on it, are suspended. Perhaps it is not unreasonable to suppose, that by pursuing this line of investigation we may be enabled to arrive at some more precise knowledge respecting the nature of respiration, and the purposes which it answers in the animal economy. It would

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however be foreign to the plan of the present communication to enter into any speculations on this subject, and I shall therefore only remark, that the influence of the nervous system does not appear to be necessary to the production of the chemical changes, which the blood undergoes in consequence of exposure to the air in the lungs.

"The facts now, as well as those formerly adduced, go far towards proving, that the temperature of warm-blooded animals is considerably under the influence of the nervous system; but what is the nature of the connection between them? whether is the brain directly or indirectly necessary to the production of heat? these are questions to which no answers can be given, except such as are purely hypothetical. At present we must be content with the knowledge of the insulated fact: future observations may, perhaps, enable us to refer it to some more general principle.

"We have evidence, that, when the brain ceases to exercise its functions, although those of the heart and lungs continue to be performed, the animal loses the power of generating heat. It would, however, be absurd to argue from this fact, that the chemical changes of the blood in the lungs are in no way necessary to the production of heat, since we know of no instance in which it continues to take place after respiration has ceased.

"It must be owned, that this part of physiology still presents an ample field for investigation.

"Of opinions sanctioned by the names of Black, Laplace, Lavoisier, and Crawford, it is proper to speak with caution and respect; but without trespassing on these feelings, I may be allowed to say, that it does not appear to me that any of the theories hitherto proposed afford a very satisfactory explanation of the source of animal heat.

"Where so many and such various chemical processes are going on, as in the living body, are we justified in selecting any one of these for the purpose of explaining the production of heat?

"To the original theory of Dr Black, there is this unanswerable objection, that the temperature of the lungs is not greater than that of the rest of the system. To this objection, the ingenious and beautiful theory of Dr Crawford is not open; but still it is founded on the same basis with that of Dr Black, "the conversion of oxygen into carbonic acid in the lungs," and hence it appears to be difficult to reconcile either of them with the results of the experiments which have been related.

"It may perhaps by urged, that as in these experiments the secretions had nearly, if not entirely ceased, it is probable that the other changes which take place in the capillary vessels had ceased also, and that although the action of the air on the blood might have been the same as under ordinary circumstances, there might not have been the same alteration in the specific heat of this fluid, as it flowed from the arteries into the veins. But, on this supposition, if the theory of Dr Crawford be admitted as correct, there must have been a gradual, but enormous accumulation of latent heat in the blood, which we cannot suppose to have taken place without its nature having been entirely altered. If the blood undergoes the usual change in the capillary system of the pulmonary, it is probable that it must undergo the usual change in the capillary system of the greater circulation also, since these changes are obviously dependent on and connected with each other. The blood in the aorta and pulmonary veins was not more florid, and that in the vena cava and pulmonary artery was not less dark-coloured than under ordinary circumstances. We may moreover remark, that the most copious secretions in the whole body are those of the insensible perspiration from the skin, and of the watery vapour from the mouth and fauces, and the effect of these must be to lower rather than to raise the animal temperature. Under other circumstances also, the diminution of the secretions is not observed to be attended with a diminution of heat. On the contrary, in the hot fit of a fever, when the scanty dark-coloured urine, dry skin, and parched mouth, indicate, that scarcely any secretions are taking place, the temperature of the body is raised above the natural standard, to which it falls when the constitution returns to its natural state, and the secretions are restored.

" It has been observed by a distinguished chemist, that " the experiments to determine the specific heat of the blood are of so very delicate a nature, that it is difficult to receive them with perfect confidence." The experiments of Dr Crawford for this purpose were necessarily made on blood out of the body, and at rest. Now, when blood is taken from the vessels, it immediately undergoes a remarkable chemical change, separating into a solid and a fluid part. This separation is not complete for some time; but whoever takes the pains to make observations on the subject, can hardly doubt that it begins to take place immediately on the blood being drawn. Can experiments on the blood, under these circumstances, lead to any very satisfactory conclusions, respecting the specific heat of blood circulating in the vessels of the body? The diluting the blood with large quantities of water, as proposed by Dr Crawford, does not altogether remove the objection, for this only retards, it does not prevent coagulation, and some time must, at any rate, elapse, while the blood is flowing, and the quantity is being measured, during which the separation of its solid and fluid parts will have begun to take place.

" More might be said on this subject; but I feel anxious to avoid, as much as possible, controversial discussion. It is my wish not to advance opinions, but simply to state some facts, which I have met with in the course of my physiological investigations. These facts, I am willing to hope, possess some value; and they may perhaps lead to the developement of other facts of much greater importance. Physiology is yet in its infant state. It embraces a great number and variety of phenomena, and of these it is very difficult to obtain an accurate and satisfactory knowledge; but it is not unreasonable to expect, that, by the successive labours of individuals, and the faithful register of their observations, it may at last be enabled to assume the form of a more perfect science."

PART II.

CRITICAL ANALYSIS.

I.

Medico-Chirurgical Transactions, published by the Medical and Chirurgical Society of London. Volume III. 8vo. pp. 383; with seven plates. Longman and Co. 1812.

IT has been a subject of frequent observation and regret, for which indeed there has been but too strong a foundation, that, with whatever portion of zeal the votaries of medicine have set forth in their professional career, they have too commonly sunk nto mere practitioners, and have ceased to contribute their assist- nce to the improvement of medical science, in proportion as heir opportunities and accumulated knowledge rendered them apable of supplying the defects and elucidating the obscurities f their art. Even the best efforts that have been made to bring he stores of experience before the public, seem to have been orced, and therefore transient,—depending in reality upon the ersonal influence and exertion of two or three active and zeal- us individuals. Thus to the indefatigable ardour of the first rofessor Monro, the public is almost exclusively indebted for he commencement, and entirely for the continuation of the valu- ble collection of "Edinburgh Medical Essays and Observa- ions," the first specimen of this sort of thesaurus ever publish- d*. In like manner, the brief and transient activity of the ollege of Physicians, in London, which produced three useful olumes of "Medical Transactions," but which has produced othing more of this sort during as many centuries, appears to ave been suggested and carried into effect principally by the eal of the late amiable and learned Dr Heberden†, whose con-

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[*] See the Life of Dr Monro, written by his son Dr Donald, and prefixed to e posthumous edition of his works.

[†] Dr Heberden has claimed the merit of this in the brief sketch of his own e, prefixed to his "Commentarii."

tributions to the stock of information were both numerous and valuable. And a third and highly valued collection of papers, th "Medical Observations and Inquiries," appears to have been th result of the united energies of Dr Fothergill and Dr Willia Hunter. The transitoriness of all these publications, therefore has been only commensurate with that of individual life an strength; increased, in the first and last instances, by the privacy of the association which gave them birth; and, in the second by the more important political duties of the corporation, whic are, in fact, the sole objects of its constitution. It is, therefore consolatory to observe a society which is instituted upon publi principles that may lead to a more permanent establishment, an whose object is exclusively the furthering of medical science proceeding with the energy and ability, which the speedy publication and valuable contents of this third volume evince,—a energy which appears to

> "Grow with its growth, and strengthen with its strength,"

and affords an earnest of a long-continued and fruitful harvest.

The volume opens with an interesting paper of Sir Gilber Blane's, relative to intermittent and remittent fevers, and the exhalations which occasion them; being chiefly the result of hi official investigation of the diseases, which occurred among th English troops in Zealand, in the autumn of 1810. Next to th able, elaborate, and comprehensive work of Dr Bancroft, latel reviewed in this Journal[*], the terse and sensible paper befor us may be deemed the most satisfactory document extant upo the subject of marsh effluvia, and of the origin of the endemic to which they everywhere give rise; and the exact correspondence of the facts and inferences, collected by Sir Gilbert Blane with those so satisfactorily stated by Dr Bancroft, is gratifying t the mind that seeks anxiously for truth, amidst a mass of contradictory evidence. Sir Gilbert shews, that, notwithstanding th great extent of the sickness, which, at the time of his arrival rendered two thirds of the army incapable of duty, typhus an dysentery had not appeared, except in one or two regiments situated in particular circumstances at Flushing: the whole of th patients were affected by the endemic of marshy districts, whic had in a similar manner affected the French troops, who ha occupied Flushing during the preceding seven years, and i former times also the Dutch troops from the northern parts o the United Provinces.

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[*] On Yellow Fever, &c. See the No. for July 1812. Vol. VIII. p. 324.

The same general facts, which have been observed under similar circumstances elsewhere, were here ascertained by Dr Blane; and had been distinctly made out by General Monnet, during his long residence there, as was evinced by a *memoire* found in his house. These facts are, the greater liability of new-comers to be affected by the effluvia; and especially of those who come from mountainous and dry countries; the effect of warmth, good diet, and comfortable accommodations in securing individuals from their influence,—the short distance to which their influence reaches either in perpendicular altitude, or horizontally,—the more deleterious qualities of these effluvia than those of the marshes in England, and the progressive increase of malignity in the miasmata of more southern climates,—the long period during which the infection by miasmata often lies dormant, so as to be excited to action by fatigue or exposure to cold some time after the persons have removed to another country,—and the liability to relapse from the same causes,—and, lastly, the obvious connection of these remittents and intermittents with an excessive secretion of bile.

The following practical remarks, as they accord with the statements of the best writers on the *yellow* fever, and other forms of the remittents, deserve to be impressed upon the minds of all practitioners, who may have occasion to meet disease in marshy regions; the repetition of them, however, is, we trust, becoming every day less necessary, as the propriety of regulating the functions of the alimentary canal, and of avoiding stimulants in the early stages of *all* fevers, is daily more clearly perceived.

> " It is evident," says Sir G. Blane, " that the severity of the symptoms of the Zealand fever, added greatly to the difficulty of the cure; and there could be *no opportunity* of employing Peruvian bark or other specific remedies, till its violence had abated, and the redundant bile had been carried off. The treatment of the acute state, consisted chiefly in giving such remedies as *purged freely;* and in selecting them, the preference was due to those which acted most readily on the liver and the bile, such as calomel;—those which were least heating, as the neutral salts;—and such as were best borne by the stomach, which, in a great many cases, was extremely irritable."

The author bears strong testimony to the powers of opium and arsenic, in curing intermittents, and also remittents, when a complete intermission has been obtained by purgatives of calomel. He administered from 30 to 50 drops of the tincture of opium, a few hours *before* the expected paroxysm. " Sometimes the first administration of this stopped the paroxysm; but more commonly only alleviated it, and did not stop it till the second or third time." Arsenic was given in the intervals, especially where the stomach would not bear bark; and Sir Gilbert states, that he has made little use of the oxide of zinc, steel, &c., since he became acquainted with the superior powers of opium and arsenic. We shall have occasion to allude to the peculiar advantages of giving an opiate *previous* to the commencement of the paroxysm, in intermittent diseases, before we conclude this article.

We regret that the number of topics, pressing for notice, prevent us from following the author, through the remainder of this paper, and its appendix, which contain some interesting observations on the variations of health in this country in different periods of its history; these are, however, less original than the preceding portion of the Essay.

Mr Chevalier has contributed three well detailed papers to this volume, the first of which is the "History of a remarkable case of Ovarian Dropsy," in a young woman, of 23 years of age. The enormous bulk of the abdomen, which measured sixty-three inches and a half in circumference, and contained (it is estimated) seventeen gallons of water, is the most extraordinary feature of the disease; and the great weight of the fluid was the principal inconvenience suffered by the patient: for the bowels continued regular, aud the pulse and respiration were unaffected. An attempt to relieve her of this cumbersome load was made judiciously by moderate successive tappings; but one of two large cysts, connected with the left ovarium, was subsequently affected with a slow, but extensive inflammation, which ended her life in the space of two months.

In a second short paper, Mr Chevalier describes "an improved method of tying diseased tonsils," which he illustrates by an engraving, representing the sort of noose which he employs. He *pierces* the enlarged tonsil through the middle of its base, and carries a long double ligature through it, which he brings out at the mouth, and divides, tying one portion round the upper, and the other round the lower half of the tonsil. This produces a good deal of inflammation for about three days; but the tumor is generally detached on the 4th or 5th day, and the sore readily heals.

Mr Chevalier's third paper contains an interesting "case of spontaneous extravasation of blood, within the theca vertebralis, which soon terminated fatally." It occurred in a girl of 14, and was accompanied by pain in the back and head, with sickness on sitting up, and a quick pulse. At the end of about a fortnight, she complained of a sudden and violent increase of pain, and was immediately seized with convulsions, in which she expired. On examination, the brain and all the viscera were found to be healthy, and the spine was free from any external morbid appearance: but having cut away the bodies of the lumbar vertebræ, close to the seat of pain, Mr Chevalier discovered the spinal canal filled with blood. "The blood, though florid, was not all of an equal tint, it was very imperfectly coagulated; it is therefore probable that the vessel first gave way at the commencement of the illness, and again to a much greater extent at the time the convulsions came on." Mr Chevalier mentions also the case of a child a year old, which, after being carried out by a nurse, returned in great pain, and appeared to have lost the use of its lower limbs. It died in three days, and the spinal tube was found filled with a bloody serum, probably "occasioned by slight extravasation from a strain, and subsequent inflammatory effusion." He likewise mentions the case of a miller, who suddenly lost the use of his lower extremities by lifting a heavy sack, and died in a fortnight. The vertebral canal was found to contain some blood mixed with a sanious matter, and the theca vertebralis was evidently inflamed.

These cases he considers as a sort of partial spinal apoplexy, which should be treated by early bleeding, in order to prevent the increase of the extravasation.

Dr Merriman communicates two papers on obstetrical subjects, the first of which contains an account of "a case of difficult parturition, occasioned by a dropsical ovarium, forming a tumor in the lower part of the pelvis," intended as an illustration of a paper by Mr Park, of Liverpool, published in the second volume of the Society's Transactions. This woman was parturient of twins, one of which was delivered after opening the head, the other, which was dead, by the natural efforts; but she died of subsequent peritonitis.—In such a case, the practice adopted by Mr Park, of opening the impeding tumor, (which here lay between the rectum and vagina of the size of a trap-ball,) through the vagina, might have saved the life of one child and the mother. But Dr Merriman enters into a discussion upon the question, of making an incision into those other tumors of the pelvis, which contain no fluid, but teeth and hair, &c., which are sometimes also impacted in the pelvis; and he concludes that an operation might still be practicable and safe, extirpating either the encysted mass, or the whole diseased ovarium.

The second paper of Dr Merriman is entitled, "Cases of premature labour, artificially induced, in women with distorted pelvis, to which are subjoined some observations on this method of practice." This is a sensible dissertation on the subject of a practice, which has been occasionally adopted in this country for upwards of half a century, but which has been absurdly condemned by some individuals upon moral grounds. Its physical advantages being fairly estimated, and found to predominate greatly over those of every other proceeding, it were but a waste of words to argue in favour of the use of a practice, against which the possible immoral abuse can alone be urged. Dr Merriman states the following among other rules by which the adoption of the practice ought to be limited. That the operation should never be undertaken,—till (1.) seven complete months of utero-gestation have elapsed,—and (2.) till it has been ascertained by *previous experience* that the mother is incapable of bearing a full-grown fœtus alive,—nor (3.) when she is labouring under any dangerous disease. He suggests too that every care should be taken to guard against the attack of fever, which is not an unfrequent consequence of the premature uterine action; and "lastly, that a regard to his own character should determine the accoucheur, not to perform this operation, unless some other respectable practitioner has seen the patient, and has acknowledged that the operation is advisable."

Mr Parkinson relates a case of disease in the appendix cæci vermiformis, which terminated in ulceration and opening, through which a fluid escaped into the cavity of the peritonæum, and produced a fatal inflammation of that membrane.

Two communications have been presented to the society by Mr Lawrence, the first of which contains the history and dissections of five varieties of disease, partaking of a fungous character, and occurring in several internal and external organs of the individuals at the same time: some of them resemble the morbid growth, which Dr Farre has described as the tubera diffusa, affecting the liver, brain, lungs, &c.* The first case is related by Mr Henry Earle; in which the disease occurred most conspicuously in the testicle; but was found on dissection both in the brain and the lungs. In the first of Mr Lawrence's cases, the fungous growth, the most striking character of which was its "bright yellowish-green colour, intermixed with more or less red, and a few portions nearly white," covered the chest, penetrating the pectoral muscles, and filling the axilla: it affected also the right pleura, especially over the diaphragm, and the peritonæum beneath it; it was found in the pancreas and kidneys, and very extensively in the lymphatic glands, in various parts of the body.

No inferences are attempted to be deduced from these singular and anomalous appearances, which can only cease to be anomalous,

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* See our Review of his Morbid Anatomy of the Liver, in the last Number of this Journal.

lous, when the industry of practitioners shall have multiplied the number of records relating to them, and traced their common character.

The second communication from Mr Lawrence, is a history of a case of a somewhat similar character with the preceding, in which the disease, lately called fungus hæmatodes, appeared also in various external and internal parts, and terminated fatally. It is related by Mr Langstaff, of Basinghall Street.

Dr Farre has given the detail of two cases of "cynanche laryngea," that fatal variety of sore-throat, which has not been sufficiently noticed until within these few years, when it deprived the profession of two distinguished members, Dr Pitcairn, and Sir John Hayes, and has commonly been confounded with *croup*. The second case, in which life was obviously prolonged for a day by the operation of bronchotomy, we shall transcribe.

"A poor, but industrious and temperate man, about 60 years old, on Sunday the 31st of March 1811, was affected with a painful and difficult deglutition. On the following morning, April 1st, alarmed at his inability to swallow fluid, which, on the attempt being made, returned by his nose, he sent for Mr Weston, who found the tonsils inflamed and disposed to ulcerate. A brisk purge was ordered. At ten o'clock, on the same evening, his respiration suddenly became difficult, when Mr Weston immediately drew from his arm 32 ounces of blood, which proved to be very sizy. In the course of an hour I attended, and observed the character of his disease at this stage. Although the tumefaction of the tonsils was inconsiderable, deglutition was extremely painful, and very difficult: respiration was performed with convulsive and long-continued efforts; his voice was nearly inaudible, and he could only whisper. He answered my inquiry respecting the seat of his suffering, by putting his finger on the superior part of the thyroid cartilage. He felt no pain in the chest. All the muscles of respiration were thrown into violent action, and he lay with his mouth widely opened, pupils dilated, face pale and sunken, skin covered with a clammy sweat, and his pulse at 133 and small. His powers were prostrate, and general bleeding could not be repeated. The anterior part of the throat was covered with leeches; but the disease never paused. At midnight, the operation of bronchotomy seemed to be the only resource; and soon after one o'clock, I decided on its employment. About two o'clock, Mr Astley Cooper attended, and as suffocation was instantly impending, the operation was immediately performed, by dividing, laterally, the ligament which connects the thyroid with the cricoid cartilage. The dyspnœa was much relieved by the operation. He now lay passive, breathing by the natural and artificial apertures, and the inordinate action of the muscles of respiration had ceased. He swallowed some nourishment with a painful effort. In this state he passed the night, and the greater part of the following day. In the afternoon, the respiration by the natural passage entirely ceased, but was continued by the artificial aperture. He was now evidently sinking, and expired at six in the evening.

" April 3d, eight o'clock A. M. Dissection by Mr Astley Cooper. The right tonsil inflamed and vesicated; the epiglottis swollen, its edges meeting behind, excepting just at the upper part. Pharynx inflamed, somewhat vesicated, covered with coagulable lymph about the epiglottis, but free from inflammation near its termination in the œsophagus. The aperture which had been made between the cartilages, appeared to be about half the size of the glottis. The mucous membrane of the larynx and trachea was pale. There was some accumulation of mucus in the cells of the lungs, and a slight effusion of serum into their reticular texture. The left pleura partially adhered, and the cavities contained rather more fluid than is natural to them. The abdominal viscera were not examined.

" I may be allowed to remark," Dr Farre adds, " that Cullen's character of his fourth species of cynanche, will not embrace the cases which I have above described. 'Cynanche (Pharyngea) cum rubore in imis præsertim faucibus; deglutitione maxime difficili, dolentissima; *respiratione satis commoda*; et febre synocha.' The anterior part of the pharynx was indeed the seat of inflammation; but that portion of the membrane being also common to the larynx, it may, in a practical sense, be useful to term the disease *laryngea*, because it proves fatal by constricting or actually closing the glottis, and constitutes precisely that case which, in its ultimate degree, imperiously demands the operation of bronchotomy."

The interesting conversation, which took place in the society when this paper was read, induced Dr Farre to bring the subject forward again, in a paper printed in a subsequent part of the volume, in which he dwells principally upon the diagnosis and method of treatment of this insidious species of cynanche. The inflammation is most intense at, if not chiefly limited to the mouth of the larynx, whence the rima glottidis becomes so much narrowed as to impede respiration. It cannot easily be mistaken for cynanche tonsillaris; for the visible affection within the fauces is often extremely slight. The principal painful sensation is also felt in the larynx, or about the middle notch of the thyroid cartilage. The difficulty of diaghosis lies between this cynanche laryngea and croup. Dr Pitcairn wrote on a piece of paper, that his complaint was croup. But, Dr Farre observes,

" In the cynanche laryngea, the symptoms are, uneasy sensation in the larynx, difficult and painful deglutition, partial swelling in the fauces, a supervening and perpetually increasing difficulty of breathing, inflammatory fever. In the cynanche trachealis there is a difficulty of breathing, without any swelling in the fauces, or painful deglutition, the expirations, especially in coughing, are very shrill, the fever is inflammatory."

The morbid appearances, ascertained by dissection, are considerably different in the two diseases.

“ In the former (laryngea), the mucous membrane, investing the epiglottis and margin of the glottis, is inflamed; serum is effused under it, or coagulable lymph on its *external* surface, by which the *rima glottidis* is narrowed, or actually closed. In the latter (croup) the mucous membrane of the larynx and trachea is inflamed, and a layer of coagulated lymph is formed on its *internal* surface, from the extremity of the epiglottis to an indefinite extent within the trachea, by which *the tube itself* is narrowed or actually closed: a puriform fluid, instead of mucus, is found in the trachea and bronchia.”

The treatment recommended appears to be judicious; namely, copious blood-letting in the first stage of the inflammation, i. e. within 30 hours of its commencement, when the patient feels uneasiness in the larynx, with a very painful and difficult deglutition, which the apparent state of the fauces cannot explain. But if this fail to relieve, and the dyspnœa supervenes, the narrowing of the glottis has commenced; and in this dangerous stage, in which effusion is going on, free local blood-letting, with calomel and tartarized antimony internally, to diminish the activity of the capillary circulation, are advised. But in the advanced period, bronchotomy affords the only chance of escape from suffocation, by enabling the patient to breathe, till the inflammation narrowing the aperture of the glottis may have time to subside.

“ That the disease is a local one,” Dr Farre observes, “ that it is acute and of short duration, that it affects a mucous membrane, which consequently does not readily take on the adhesive inflammation, or if it should be so acutely inflamed, easily sheds the lymph that had been effused on it, are circumstances which, in the otherwise hopeless state of the patient, justify a trial of this operation.”

We have dwelt a disproportionate length of time on this topic, on account of the importance and novelty of the disease, which nothing but a sagacious and early discrimination, and an active employment of appropriate treatment, will enable the practitioner to manage with success.

Dr Yelloly has related an interesting case of Anæsthesia, which sets at defiance all hypotheses, concerning the nature and communication of nervous influence. This occurred in a middle-aged man, who had spent many years in Jamaica. He gradually lost all sensation in a great part of the legs and arms, while the power of muscular motion, and the command of the will over the muscles, remained as usual; at the same time the circulation continued active, and the process of healing, when the parts were injured, was quick and natural. We shall quote a few symptoms.

"The hands up to the wrists, and the feet, half way up the leg, are perfectly insensible to any species of injury, as cutting, pinching, scratching, or burning. The insensibility, however, does not suddenly terminate; but it exists to a certain degree, nearly up to the elbow, and for some distance above the knee. He accidentally put one of his feet, some time ago, into boiling-water, but was no otherwise aware of the high temperature, than by finding the whole surface a complete blister on removing it. No species of injury to a vesicated part is felt by him. The extremities are insensible to electrical sparks, taken in every variety of mode. The cubital nerve, where it passes the elbow, communicates the sensation produced by pressure or a blow only half way down the fore-arm."—"If he wishes to ascertain the temperature of any body, he is under the necessity of putting it to his face, or neck, or the upper part of his arm."

Yet there is an unusual irritability of the skin, especially under the influence of heat. For

"On putting his hand, at the desire of a friend, into a pail of hot grains, which his friend assured him were not too hot, and to convince him of this, previously thrust his hand and arm into it, there was a very extensive vesication produced. His hands are never free from blisters, which he gets by inadvertently putting them too near the fire; and he has met with several severe burns, without being aware of it."—"His skin, in general, heals very readily, after being burnt or scalded in the most severe way; and there is no fever, nor is there, as far as he has been able to determine, any increased heat or throbbing during the process of healing."—Yet "immersion in water at 120° produces no change in the affected parts; but exposure to the same temperature at a common fire speedily blisters." —"Cold water and warm water of every temperature invariably appear lukewarm to him."—"The power of motion exists in the muscles of both hands and feet. With the former he can grasp pretty firmly; but in holding anything he is apt to drop it, if his attention is at all called away."—"The functions are natural, and the pulse regular and moderate."

The insensibility exists in the muscles as well as integuments; for he allowed the fleshy part of the thumb to be pierced to the bone by a couching-needle, from which he experienced no sensation whatever. No treatment, such as the warm bath, electricity, galvanism, tonics, rhus toxicodendron, and mercurial purgatives, produced the least influence on the disease.

Dr Yelloly has added two analogous cases, one from the American Medical Repository, Vol. IV. p. 225, and another from the "Philosophie Zoologique," Tom. II. p. 262, of Lamark.

Dr Bree communicates another "case of splenitis, with further remarks on that disease," which, like the instance related in the preceding volume, evinces the advantage of a steady purgative course in such affections. And Mr Copeland describes the case of a lady, who had an abscess in the groin, from which a calculus was extracted, after it broke, of an oval form, and more than half an inch in length. This was not a biliary calculus, like that discharged in a case related by Petit, to which Mr Copeland refers; but was found by Dr Marcet to be of the fusible kind, consisting of the mixed phosphat of lime and ammoniaco-magnesian phosphat.

Two contributions of Dr Bostock are characterized by the usual accuracy and perspicuity, which mark every production of his mind The first consists of some very interesting and novel "observations on diabetes insipidus." The existence of such a disease has of late been doubted, or altogether denied, the mere quantity of urine being considered as depending upon circumstances altogether different from the true diabetic diathesis. But although there was no saccharine matter in the urine of the patient, whose case is described by Dr Bostock, he found, upon chemical examination, that it differed materially from healthy urine, inasmuch as it contained a very large proportion of animal matter. The residuum, left by slow evaporation of the urine, did not differ, in its physical properties, from the extract of healthy urine. But Dr Bostock calculates, that, while his patient was passing 7℔ troy of urine more than the average healthy quantity, she was discharging daily between 9 and 10 ounces of solid matter, or about 8¼ more than in the healthy state; i. e. above 6 ounces of urea, and 1½ of salts, more than natural.

To this case, therefore, though no sugar existed in the urine, Dr Bostock conceives the appellation of diabetes is strictly applicable.

> "It possesses the three pathognomonic symptoms of the disease, the increased appetite for food, the suppression of the cutaneous discharge, and especially, the evacuation from the urinary organs of a larger quantity than ordinary of animal matter. This latter circumstance is essentially different from the mere increase in the quantity of water, a morbid state which has often been confounded with diabetes, but from which I regard it as totally dissimilar."

Dr Bostock states a question, whether this disease is the commencement of diabetes mellitus, or has a tendency to terminate in it? which he is disposed to answer in the affirmative; more particularly from the consideration of a case communicated to him by Dr Lewin. Shrewdly suspecting diabetes from some other symptoms, Dr Lewin examined the urine, and found it copious: a specimen was sent to Dr Bostock for examination. There was at this time no sugar; but the urine being again submitted to chemical examination, at a subsequent period, was found saccharine.

" To Dr Lewin's sagacity in detecting the nature of the disease in this early stage," Dr Bostock observes, " we may consider ourselves as indebted for the important fact, that a small quantity of sugar can exist in urine along with a large quantity of urea. The case is almost equally decisive in favour of the conversion of insipid, into the saccharine diabetes, and renders it probable that the two states alternate with each other, until, as the constitution becomes more and more impaired, the saccharine state of the urine predominates."

We cannot omit the following statement.

" With respect to the *treatment* which was adopted in this case, I shall make only a very few remarks. As the urine was not saccharine, animal diet was not prescribed, and those remedies only employed, which were supposed to have the power of strengthening the digestive organs, and reproducing a healthy state of the skin. For the former purpose, the preparations of iron were chiefly relied on, and for the latter the warm bath; but I suspect that the morbid symptoms were so far connected, that whatever tended to relieve the one, was likewise beneficial to the other. The result was completely successful; the constitutional affections disappeared, the urine was reduced to the natural standard, and the surface regained its healthy action. The patient has remained well for above 12 months."

The second communication of Dr Bostock is an account of some analytic " experiments on the bark of the coccoloba uvifera," the extract from which is of a similar nature with the kino used in medicine; but the latter is obviously derived from a different plant. In 100 parts of this bark, there are 50 of woody matter, 41 of tan, and 9 of a balsamic substance.

This volume contains a valuable chemical memoir from the pen of Dr Berzelius, the intelligent professor of chemistry at Stockholm, who spent the autumn of 1812 in this country: it relates to " the composition of Animal Fluids." As this memoir is itself a condensed summary of several publications, and occupies about eighty pages, we cannot here enter into a minute account of its contents. We may merely observe, that it commences with an analysis of bullocks blood, detailing the chemical properties of all its component parts, such as the fibrin, the colouring-matter, &c. and entering minutely into the investigation relative to the influence of iron in the latter, and then comparing the same parts of human blood, which differs in some respect from that of bullocks. The author then passes to the chemistry of *secreted* fluids, which he discusses generally and individually, including the bile, saliva, the mucus of various membranous organs, the fluids of serous membranes, and the humours of the eye; and afterwards examines the *excreted* fluids, perspiration, urine, and its depositions. He concludes with an analysis of milk. Prof. Berzelius appears to have carefully compared and repeated the analysis of other chemists, on whose inferences he comments with great ability; and on the whole has presented a clear, original, and compendious view of the chemistry of the animal fluids. It tends greatly to establish the value of the recent chemical investigations on these subjects, to observe the accurate coincidence of these analyses, made in a distant country, with those of Dr Marcet and Dr Bostock, previously made here; for the difference between them is but in the fraction of units.

Through the hands of Dr Marcet, by whom the paper just mentioned was introduced to the society, another curious memoir, drawn up by the patient, R. C. Esq. F. R. S. a well-known chemical philosopher, is presented in this volume. It relates to a new mode of curing chronic rheumatism, especially sciatica, which Mr C. borrowed from *the stable*, after having exhausted, during a series of years, all the expedients of the materia medica, both regular and empirical. After a short history of years of lameness and suffering, and vain efforts to obtain a cure, the writer states;

“ Happening about five weeks ago to hear of a case, which bore a strong analogy to my own, though the subject was not a human creature, it suggested to me an experiment which I resolved to try immediately. A celebrated race-horse (Vandyk) belonging to a nobleman very well known at Newmarket, had been cured of a disorder, which had all the symptoms of rheumatism, by *sweating in body clothes*, after every other remedy had failed. I therefore clothed myself in a sufficient quantity of flannel, and set out to walk as far and as fast as I could. With the utmost difficulty I proceeded half a mile; and the pain I suffered contributed not a little to the effect of the exercise in promoting perspiration. I returned home in a profuse sweat, rubbed myself dry before a fire, and went to bed. In about an hour I got up, found myself very much fatigued, but in other respects not worse. Forty-eight hours after this, I repeated the same kind of exercise, and found that I could walk a mile with as much ease, as I had walked half that distance on the first day. My general sensations were the same as before; but, as the fatigue diminished, I thought I could perceive an amendment in my rheumatic pains. Two days afterwards I took my third walk, proceeding as before, and after it I had a better night, less interrupted by pain, than any I had enjoyed for eighteen months. From that moment I looked forward with confidence to a cure, and I have not been disappointed. Every succeeding walk has diminished my sufferings,

ferings, and I may safely say, that after the sixth, I was as free from pain as I had ever been in my life. The only remnant I have left to remind me I was so lately a cripple, is a weakness in the left leg," &c.

Some good physiological inferences are attached to this relation. The body-clothes are fully described, and the gentleman would have outdone the grave-digger, in Hamlet, in the number of flannel-waistcoats and drawers which he pulled off on returning from his walk.

The volume contains three other papers; one from Dr A. P. Wilson Philip of Worcester, detailing a severe case of disease in the organs of respiration, with the dissection;—a brief chemical notice by Dr Marcet, respecting the use of the nitrat of silver, in detecting minute portions of arsenic;—and lastly, the "history of a case of remitting ophthalmia, and its successful treatment by opium," by Dr Curry, of Guy's Hospital. This history is detailed with all the minuteness and point, which an acute medical observer might be expected to impress upon the relation of his own case. The principal circumstance illustrated by this case, is the important relief obtained by a full dose of opium, given *previous* to the exacerbation, in a most violent, painful, and alarming degree of ophthalmia, which was remittent, and recurred in daily paroxysms, after copious local depletion had been employed in vain. It was further proved, that the opiate, taken *after* the paroxysm had begun, aggravated its violence and lengthened its duration. This is perhaps a matter of general occurrence in intermitting diseases; the same anodynes and stimulants which will diminish or altogether prevent a paroxysm, if administered a short time previous to its occurrence, will both augment and protract the evil, if given during its existence.

It will be obvious, from this analytical review, that the contents of this volume are both curious and interesting. Some want of care is manifest in the printing of it; for there are several unfortunate, though perhaps obvious, typographical errors: such as *carved* for curved, in the description of an instrument (p. 81.);—Dr Bostock's patient passed "solid *water*," (matter?);—and he removed the subject of his experiment "from the *lump*" (lamp?) Mr Parkinson's paper is omitted in the table of contents; and there are some more trivial oversights.

H.

II.

Memoires de Chirurgie Militaire, et Campagnes de D. J. LARREY, Premier Chirurgien de la Garde et de l'Hôpital de la Garde de S. M. I. et R., Baron de l'Empire, Inspecteur Général du service de Santé des Armes, &c. &c. &c. 3 Tom. 8vo. Paris, 1812.

No one can have read the surgical history of the French expedition to Egypt by Larrey, without wishing for a continuation of that important and curious knowledge which military campaigns afford. The merits of that work we endeavoured to point out, by an early notice of it in the Second Volume of our Journal. In following the armies of Bonaparte, this accomplished surgeon-general has displayed a zeal and activity which cannot be surpassed; and he has collected a mass of experience relative to different objects of military surgery, which an individual, by his own exertions, has never before been able to atchieve.

These volumes contain an historial account of all the campaigns which the author has served, from the beginning of his career in 1787, to the close of the Austrian campaign at the battle of Wagram in 1809, and his "Relation chirurgicale de l'Armée de l'Orient," is reprinted without any material alteration or addition. The first volume opens with his voyage to North America, in the capacity of Surgeon on board a frigate, during which he encountered many dangers, and escaped many complicated evils, without observing any thing very new or important in the way of his profession. On his return to Paris in 1789, and previous to his first campaign in Germany, many memorable events occurred, which furnished abundant opportunities for seeing wounds of all kinds, and watching their treatment by Dessault at the Hotel Dieu. It was at the taking of Spire with an army of 40,000 men, under General Custine, that Larrey first discovered the very great defects of the hospital-staff in the French army, and the imperfect manner in which its duties were performed. Military regulations had determined the fixed station of the hospital-staff, in consequence of which the wounded were left on the field of battle until fighting ceased. They were then assembled in some convenient place, and the medical officers brought up as quickly as possible; but the delay was unavoidably so great, that twenty-four, sometimes thirty-six hours, and more, elapsed before they could be attended to;—consequently many men perished for want of assistance. Carriages, or waggons, constructed on springs, for the purpose of receiving the wounded, were proposed by Larrey, and a corps of men and horses appointed to attend them, furnished with proper instruments, dressings, and medicines;—a sort of moveable infirmary, always to attend the advanced guard, and to follow the squadrons like flying artillery. This invention had a powerful effect upon the minds of the soldiers, who were thus assured of being dressed immediately after being wounded, and carried off the field. In every subsequent campaign these *ambulances volantes* were constantly employed, and they appear to be well-suited for their purpose.

The capture of Mayence afforded our author an opportunity of prosecuting his anatomical studies under Soemmering; and we are continually reminded of his indefatigable zeal for his own improvement, and for that of the young surgeons in the army, by frequent notices of a clinical school being established by him in every place where an hospital was to be found, and where he was stationed, though only for a short time. In all the principal towns in Italy, in Egypt, in Prussia, Poland, Spain, and Austria, Larrey never failed to devote some time in every week to clinical lectures and anatomical demonstrations, which must have been instructive to the hospital mates, and very advantageous to the whole medical staff. He was called away from the army of the Rhine to Paris, to arrange the hospital-staff for all the armies. In the mean time he married, but was soon obliged to leave his wife at Toulouse, being ordered to join a division of the army destined to Corsica.

At Toulon he presented himself to the commanding-officers, among whom was general Bonaparte, commander of the flying artillery. This expedition to Corsica was stopped by the British cruizers, and the troops and the surgeon-general had sufficient occupation in Italy. It was during his residence on the Italian coast, that Larrey opened the bodies of persons who had been drowned, and he says, he found that the cause of death in these cases is the introduction of water into the bronchiæ; the lungs he found always heavier and less crackling than in their natural state, and filled with a reddish-coloured fluid. He saw very little water in the stomach, but evident marks of the want of proper changes in the blood. Although we allow these facts, we are surprised at the author's conclusion; because it is now admitted, that the water discovered in the lungs passed in after death, since animals taken immediately from the water after submersion, are not found to have received any. The immediate cause of death from drowning has not been completely ascertained.

Many probably concur,—but we think experiments have proved the fallacy of that opinion which attributed the suspension of vital action to the accumulation of water in the lungs.

A singular disease appeared among the regiments who returned to France from the Maritime Alps, in the spring of 1794. It was mistaken by some for a syphilitic, by others for a scorbutic complaint. It is an affection of the mucous membrane of the mouth; the gums become excoriated; aphthæ cover the inside of the mouth, which put on a whitish and chancrous appearance, accompanied by diarrhœa and excessive weakness. Melted snow, which is said, when drunk, not to allay, but to increase thirst, was supposed to be the cause of this disease. Mercury aggravated the symptoms. Acids, generous diet, rest, good air, and warm lodging, cured them. A similar complaint attacked the grand army at Osterode, in Prussian Poland, after the battle of Eylau.

In the campaign of Italy, many instances occurred of the breaking out of contagious fever in barracks, and towns, and on board ships, which could always be traced to filth, want of ventilation, and marshy ground, and the progress was always stopped by attending to these causes.

The springing of some batteries furnished an opportunity for our author to record his method of treating burns. He employs mild ointments and soothing applications first, and then makes use of stimulating ointments. He protests against the early application of discutients, such as cold water, preparations of lead, lime, opium, &c. and adduces the unfavourable termination of cases so treated, after the dreadful fire at the Austrian ambassador's fete at Paris, in 1810.

We can afford no room to make extracts from the account of the campaign in Egypt;—our readers may turn back to our former analysis, or (what will be more profitable) peruse this interesting narrative over again. In 1805 Larrey was ordered from Paris to Boulogne, where the army was embarked, and the Emperor was present in command, waiting for the arrival of the combined fleets of France and Spain, which were to attack our ships in the Channel, and assist in the invasion of England; but, in the midst of these immense preparations, a new continental coalition was formed, and France was threatened by the armies and high political tone of Austria. At this critical juncture, Nelson vanquished the combined fleets in the glorious battle of Trafalgar, and the face of every thing was changed by the result of that splendid achievement. A new plan of operations was instantly decided on; the troops were disembarked from the flotilla; and they traversed France, crossed the Rhine, and entered

Germany with such rapidity, that the Austrians were attacked before they were fully assured of the French army having begun to march. The capture of Ulm, and of the whole of Mack's army, is entertainingly described, and the contrast between the conquerors and the conquered is patriotically drawn. There was continual rain and snow during their route to Vienna, and the soldiers were unable to dry their clothes, so rapid were these forced-marches. They were also unprovided with the necessary defence against the vicissitudes of the weather, from their baggage not being able to keep pace with their movements, and the soldiers were only served with a regular supply of provisions in the large towns. In spite of all these hardships, there were scarcely any sick. The constitution of the men seemed to become more robust, their minds were so elated by victory; and hence we may account for the success of the Greeks and Romans in their expeditions where the obstacles appeared insurmountable. A soldier accustomed to the duties of the army, endowed with a true military spirit, and arrived at the age of manhood, will not become sick, whatever fatigue he may undergo in an inclement season, provided he is not compelled to remain too long without food. We are inclined to think this observation will be confirmed by the experience of all military surgeons. The irregular supply of food, and the unfinished growth, the imperfect developement of the physical powers of the body in many of the soldiers who enter the army before they have reached the period of manhood, appear to us to be two of the great sources of a long sick-list in a campaign.

After the battle of Austerlitz, the wounded of both French and Russian armies were assembled in great numbers at Brunn. In consequence of so many men being crowded together, a malignant typhus fever broke out, which committed extensive havoc. The hospital-gangrene also occurred, which spread rapidly, and, in less than a month, the hospitals appropriated for regiments of the line lost one-fourth of their wounded patients; but the guards were fortunately saved from this contagious malady, by being situated at a distance from the other sick and wounded, in an airy hospital, in another part of the town.

The remedies employed were, cupping upon the nape of the neck and the hypochondriac regions; sinapisms applied to the soles of the feet: stimulants and antiseptics to the wounds; acid drinks, and cordial draughts, composed of æther, camphor, and musk. General bleeding, recommended and practised by some physicians in this disease, constantly proved fatal. Dr Roussel fell a victim to this remedy, which he insisted upon being employed in his own person, when he was attacked with the fever which he caught in the hospitals. In the advanced period of the disease, strong mineral acids were administered, and the body washed all over with cold camphorated vinegar, and even with ice, when the animal temperature was very high. Opium and bark proved injurious in the beginning of the disease; they were afterwards employed with good effects. Wine and coffee are not to be neglected, if those articles can be procured. Blisters, Larrey says, have not afforded the benefits which have been attributed to them in typhus-fever, *(le fiévre adynamique)*: the excoriations produced by them, he has observed, soon assume the character of sphacelus, or hospital-gangrene; the gangrene increases, and the general weakness remains the same. In cases where *l'ataxie* prevails, blisters are of great service. This contagious fever attacked the Russian prisoners, who were obliged to be lodged in the churches and other large buildings, and it spread among the inhabitants of the towns, through which these prisoners passed in great numbers on their way to France, along with the sick and wounded of both nations.

During the short stay which Larrey could make at Paris after his return from the campaign of Austerlitz, he collected his notes of the different circumstances he had observed in the dissection of persons who died from internal aneurism, and made them the subject of a memoir, which he communicated to the medical society. His observations agree with those of Scarpa, Sabatier, and Corvisart, and he seems perfectly satisfied in assigning, as the cause of aneurism, some disease of the internal coat of the artery, which he ascribes to some *virus*, either syphilitic or scrofulous, in the constitution. Aneurism is rarely seen among soldiers; it seldom arises from wounds or blows; it is more common, as Bichât remarks, among stage-players, who live intemperately. Some cases are related, in which the exhibition of mercury is said to have been followed by a diminution of the dilatation of the artery; but it must be recollected how strongly the author's mind is prepossessed with the notion of venereal virus being the principal cause of the disease of the inner coat of the arteries, and especially of the heart.

After the dissertation on aneurism, Larrey, in a sensible memoir on the spontaneous causes of active arterial hæmorrhage, describes the changes which ligatures induce upon the natural powers of the artery, in suppressing the bleeding from its divided coats. His practice and experience have led him to precisely the same conclusions, as those Dr Jones drew from his able experimental inquiry. The orifice of the vessel is not stopped, he says, by the formation of a clot of blood, but by the contraction and adhesion of the coats of the artery. The following passage is so curious and important, that it deserves to be recorded in the author's own words:

> "L'inflammation *adhésive* des parois d'une artère ouverte se fait, comme nous l'avons dit, d'autant plus promptement que le vaisseau est plus irritable, que le sujet est jeune, et qu'il y a chez lui une plus grande energie vitale. Aussi nous voyons rarement survenir des hémorragies dans les operations que nous pratiquons pour les maladies aiguës, telles que les blessures qui resultent des combats. Cependent il arrive souvent que les ligatures sont deplacées ou même arrachées peu de temps après l'operation par les secousses ou les tiraillemens que les blessés opérés eprouvent pendant leur transport des ambulances aux hôpitaux de primière ligne. Ce court espace de temps (12 or 24 heures) suffit pour établir l'inflammation adhésive. Convaincu de cette verité, je ne fais jamais qu'un seul nœud au cordonnet de fil que j'emploie pour la ligature, meme des plus gros vaisseaux. Le deuxième nœud est inutile, et s'oppose souvent à la chute du cordonnet qui peut-être engagé dans la cicatrice, comme j'ai eu occasion de le remarquer plusieurs fois, et il est alors très difficile de l'extraire. J'ai été obligé dans quelques circonstances, d'aller profondement couper sur l'artère avec des ciseaux, l'anse du fil. Il n'en est pas de meme pour les operations que l'on pratique à la suite des maladies chroniques. Les malades sont epuisés, les forces vitales se trouvent affaibliés, et l'hemorragie se renouvelle facilement, parceque l'inflammation adhesive s'etablit dans ce cas d'une maniere plus lente: il est indispensable alors de faire deux nœuds à la ligature, et de lier même les plus petits vaisseaux. L'application d'un styptique, sur les artères récemment coupées chez les animaux, suffit ordinairement pour arrèter l'hemorragie et operer l'inflammation adhesive. J'ai repeté un grand nombre de fois cette experience. Chez l'homme il arrive souvent que les lotions d'eau froide ou l'impression du froid suffisent aussi pour crisper petites artères coupées et pour produire cette inflammation: en sort que dans beaucoup de cas, on pourrait se passer de ligature, bien qu'il soit prudent de faire celle de tous les vaisseaux apparens. Dans les operations que nous avons faites à la bataille d'Eylau, avec quatorze et quinze degrès de froid au-dessous de zero, nous n'avons eu que les gros troncs des artères a lier, et la ligature la plus superficielle et la plus simple a suffi. Aucun de nos blessés ne perit d'hémorragie pendant le long trajet qu'ils eurent à parcourir pour arriver à leur destination, au dela de la Vistule." Tom II. pp. 385, 386.

Young soldiers are subject to a disease in the joint of the hip, and of the vertebræ, which is characterized by our author as the effects of *rheumatic virus*, (*des effets du vice rheumatismal sur le systéme fibreux et osseux.*) It is that formidable disease of the cartilages and articulating surfaces of bones, described by Pott, Ford, Crowther and others, which is sometimes called rheumatism, sometimes scrofula, to conceal our ignorance of the real nature of the exciting cause. Larrey boasts of his success in combating the symptoms of this disease at its first onset; all his patients were between 18 and 20 years of age, and, being soldiers, they of course came under his care before the symptoms had made much progress. If there is the least appearance of local congestion, he applies scarifications and cupping-glasses, blisters, moxa, and the actual cautery to the part affected. Mercurial frictions are directed as near as possible to the seat of the disease, at intervals of four or five days, although no suspicion of syphilis exists. This remedy, he says, produces excellent effects in all disorders, improperly called lymphatic disorders, if the patients are not already too much reduced. When matter is formed, he opens the abscess by passing a sharp-pointed wire heated red-hot, through it, and evacuates the pus as soon as possible, leaving a seton of thread in the openings. The application of moxa is to be continued, and the mercurial frictions, whilst cinchona, opium, and wine are to be administered internally, according to the state of the constitution.

Volume 3d opens to us descriptions of greater variety and higher interest; it begins with the campaign of Saxony and Prussia, in the months of September and October, 1806; and relates the overthrow of the Prussian monarchy at the battle of Jena, which afforded our author the opportunity of visiting Pottsdam, Charlottenburgh, and Berlin. In the celebrated anatomical museum collected by the two Walters, (father and son,) he thinks the preparations of blood-vessels and nerves are inferior to those made by Soemmering and Prochaska, a remark which is very just and true. Towards the end of December, the weather became very cold, and several soldiers at Berlin were suffocated by carbonic acid gas, whilst sleeping in rooms overheated by stoves; those men who lay on the floor nearest the stove died, those who slept on tables and chairs, or bedsteads near the windows, escaped. Five men were brought one morning to the hospital in a state of suspended animation, three of whom died, and two recovered. The same morbid appearances were found on dissection, as in persons who die by asphyxia; they are here particularly described.

The army marched from Berlin to the banks of the Vistula, night and day, through cold wet weather, and along roads rendered almost impassable by mud, which reached up to the horses' bellies, and stopped the wheels of the artillery and baggage-waggons at every turn. Larrey describes the march from Golominn to Pultusk as the worst and most difficult the troops ever endured. The soldiers, especially the young conscripts, were exhausted by these forced marches, by bivouacs in wet and cold, without

out food and without good drink; many became affected with catarrhal and gastric fevers.

At Warsaw, he investigated the nature of Plica Polonica, and satisfied himself that it is a local factitious disease, produced by dirt and neglect. It is not contagious, and may be cured with facility, notwithstanding all the absurdities which prejudice and quackery have set forth on the contrary. Dr Chamseru, an army-physician, has written a memoir to establish the same doctrine, derived from his own experience. Our author departed from Warsaw to join the army on the first of February, when the snow was three feet deep upon the ground, and the thermometer stood at 6° and 7° below zero, Reaumur.

The description of the bloody battle of Eylau, and the situation of the surgeons who took care of the wounded, is enough to make the stoutest hearts tremble. The thermometer early in the morning, had fallen from 24° to 18° degrees of Fahrenheit's scale. The surgical staff was placed in a barn near the road, exposed on all sides, the straw which formed the walls being carried away for the horses; the wounded men were laid upon the snow mixed with bits of straw; and the cold was so intense, that the instruments often fell from the hands of the assistants during the operations. In the midst of their laborious and painful duties, they were thrown into great consternation, by an unexpected attack of the Russians upon this very spot, and they all expected to have been taken prisoners, but were saved by a vigorous charge of cavalry, and continued their work until darkness and fatigue obliged them to stop a few hours to warm themselves by a fire, whilst sitting on frozen snow. The impossibility of procuring food, lodging, and accommodations at Eylau, compelled the removal of the wounded, soon after they were dressed, to Inowraklau, a distance of fifty-five leagues, over horrible roads, in this inclement season, and, what is extraordinary, in spite of the difficulties of travelling, and the dangerous nature of their wounds, they arrived at their destination in a very good state. Scarcely one in eleven perished. Some cases which appeared hopeless when lifted into the waggon, recovered, and on the whole, more men recovered than if they had been allowed to remain in the hospitals at Eylau, for they were free from contagious fever and hospital-gangrene. The advantages of removing soldiers to distant quarters after a battle, are ably stated.

Under the heads of dry gangrene produced by cold, and gangrene of wounds, some remarkable facts are mentioned, and some practical rules given, well-deserving our attention. Few soldiers of the advanced guard in Poland escaped the destructive effects of the severe cold upon their toes, feet, nose, or eyes, after the battle of Eylau. The gangrene in some cases was confined to the skin and soft parts; in others, the feet were destroyed by mortification. What is remarkable, not a single man suffered from the frost during the time the mercury was so low as 10°, 11°, 12°, 13°, 14°, and 15° of Reaumur's scale, (down to 0°, Fahrt. and below it;) but as soon as the thermometer rose above 0° R. (up to 43° Fahrt.), and a thaw began, many of the soldiers complained of violent pains and numbness in their extremities, with loss of feeling and animal heat, and the parts assumed a deep red colour; *some* were black and dry. Those who got into the town, and exposed themselves to the fire, fared the worst: those who followed medical advice, and rubbed the frost-bitten parts with snow, and brandy and water, escaped mortification, if it had not already taken place. Larrey considers *cold* only the predisposing cause of mortification; the sudden application of a higher temperature to parts benumbed by cold, is, in his opinion, the exciting cause of this melancholy accident.

When gangrene attacks wounds, the progress of the symptoms is essentially different, and the method of treatment must vary accordingly. Whatever may be alleged by authors and practitioners, the results of numerous observations have authorized Larrey to declare, that amputation ought to be performed without hesitation or delay in all cases of bad wounds, as soon as ever symptoms of gangrene begin to show themselves. There is no reason to fear the stump will be affected by gangrene; amputation properly performed, he confidently affirms, arrests the progress of the disease and prevents the fatal termination.

A good description is given of the medical topography of Madrid; for no sooner had the surgeon-general returned from Poland, than he was ordered to inspect the military hospitals in Spain. All the circumstances are stated which may be supposed to occasion the colic, (colic de Madrid); and the conclusion is, that the vicissitudes of the weather, the vast difference between the temperature of the days and nights, and the dress and habits of strangers, not being suited to the climate, render this city an unhealthy quarter for soldiers. It is very important for those who go to Madrid, to avoid exposing themselves to the cold and dry air of the evening and night. A malignant fever broke out among the soldiers, which was attributed to the use of adulterated wines; but the proofs of narcotic vegetable poisons being mixed with water, and added to the wine sold in the public-houses at Madrid, are not sufficiently precise and authenticated to establish the fact. Patients were suddenly seized with stupor and suspension of sensorial power, which was followed by violent fever of a low malignant character. Monsr. Frizaç, the author's favourite pupil, died of this disease on the third day after he was attacked; his death is attributed to his taking opium, and afterwards two or three small glasses full of brandy, bought in some shop where adulterated spirits were sold.

At Valladolid, the sick and wounded among the British prisoners came under our author's care, and he speaks of the miserable condition they were in, from the hardships they had undergone in traversing the mountains of the Asturias, when the thermometer stood nearly at 0° of Fahrt. Typhus fever raged amongst them and also amongst the French, but it was checked by proper care, and by a liberal supply of excellent wine and cinchona, (loxa,) which the Spaniards were compelled to furnish. A curious case is related of an English soldier of the twelfth regiment of light infantry, who became all on a sudden dropsical during his convalescence from fever; the anasarcous swelling was confined to the right half of his body, whilst the left side remained in its natural state. This complaint was obstinate, but it yielded at length to the treatment employed by the French physicians. Another case is related of gutta serena, brought on by exposure to severe cold, in a drum-boy, thirteen years old, son of a corporal in the 12th regiment, who was taken prisoner. The boy's hair had been just cut very short, and he had walked, without shoes, from Corunna to Valladolid, in the rigorous winter weather. His case excited great compassion, and our author undertook to restore his sight, which he happily accomplished, by putting him into a bath, by giving him diaphoretic bitter medicines, and by applying moxa over the passage of the facial nerve at its coming out of the cranium, behind the angle of the jaw. His head was rubbed with an alkaline camphorated liniment, covered with a wollen cap, and his eyes washed with warm wine camphorated. After the second application of the moxa, the boy saw light; after the fourth, he distinguished objects and colours; and after the seventh application, his sight was perfectly restored. To prevent inflammation and suppuration from the burnings of the moxa, ammonia was immediately applied upon the parts, which is constantly recommended after using moxa, and it is a favourite remedy in paralysis and other cases. From his attendance upon the British prisoners, Larrey caught the typhus fever, and, for ten days, was in imminent danger of falling a sacrifice to it at Burgos, but he recovered, and soon set out once more to join the guards, who had advanced into Bavaria, on their route for the second campaign in Austria, in the spring of the year 1809. The bridges across the Danube were all destroyed by the Austrians, which compelled the French to construct bridges of boats; and the hospitals were placed on the island of Lobaw, one of those islands formed by the division of the river into several branches, below Vienna. It was whilst the armies were thus situated that the battle of Eslingen took place, which furnished a great number of wounded, amongst whom was Marshall Lasnes, (Duke of Montebello), who was struck by a cannon-ball upon the knee and thigh, which fractured the bones of the joint of one limb, and lacerated the muscles of the other. His case is minutely detailed, with strong expressions of feeling, for he was the intimate friend of Larrey, and they had been together in many campaigns. His thigh was amputated, but he died on the ninth day after the operation, from fever, at Ebersdorf. The hospitals on the isle of Lobaw, underwent great privations in consequence of the difficult communication with the main-land by the few boats, and the uncertain supply of provisions and the necessaries of life. Larrey was obliged to prepare soup for his patients, made by boiling horse flesh, and seasoning it with gunpowder for want of salt. It was not unpleasant to the taste; the dark colour which it might be supposed to have from the gunpowder, was destroyed by the cooking, and, combined with biscuit, it formed excellent soup, on which the sick and wounded and the medical staff lived three days.

In Germany, as well as in Egypt, Larrey observed, when tetanus was caused by wounded nerves, if the wound was situated on the anterior part of the body, emprosthotonos was the form of disease excited; if the nerves of the posterior part of the body were injured, opisthotonos occurred; if the wound extended across a limb, so as to wound equally both series of nerves, complete tetanus took place. Trismus rarely happens from wounds, unless as a part of the general tetanus. This accident does not commonly follow severe wounds, unless in seasons when the temperature of the air changes from one extreme to another. Patients exposed to the cold and damp air of night, especially during the blowing of north-easterly winds in spring, are liable to be seized with tetanus; and it rarely attacks them when the weather does not change. Some cases are related to prove the good effects of applying the actual cautery to the whole surface of the stump, in tetanus after amputation.

One of the most difficult points in military surgery is to determine when to attempt the extraction of a ball, or any other foreign substance lodged in a wound, and when it is right to let it alone. No certain and invariable rule, our author says, can be laid down; the sagacity of the surgeon must lead him to decide on every individual case, bearing in mind, that the best practice is to leave the ball when the danger of extracting it is considerable, and when no urgent symptoms are present.

Ample experience has confirmed Larrey's opinion of the advantages of amputating at the hip-joint and the shoulder-joint. After the battle of Eslingen he removed fourteen arms at the shoulder-joint, twelve of whom recovered perfectly. The ease and expedition with which he performs these two capital operations is astonishing; and the earnestness with which he urges the necessity of amputating as quickly as possible after the injury has been received in a battle, deserves the serious attention of all our naval and military surgeons.

Those remarkable accidents attributed to the *wind of a ball*, are slightly noticed in the course of the author's researches, and he is disposed to consider them as owing to the effects of contusion, which materially injures the nerves and soft parts, although the integuments of the body give way to the impression of the spent ball, and escape being torn or wounded. He gives two histories of soldiers struck down apparently dead, without any marks of severe injury; they both recovered their senses; but one of them remained without the power of speech or taste, from the shock supposed to be given to the eighth pair of nerves.

Of several memoirs on practical subjects, our limits will not permit us to subjoin a catalogue. We take leave of this work, expressing our conviction, that the English reader who wishes to be acquainted with the manner, and method, and spirit of French surgery, will thank any translator who will reduce the substance of these three bulky volumes into a compendious and accessible form. Those who have opportunity and leisure to peruse the whole, will receive much gratification from the original edition.

III.

Sull' Ernie, Memorie Anatomico-chirurgiche di ANTONIO SCARPA, Chirurgo Consulente di sua Maestà Imperiale e Reale, Cavaliere del Real Ordine della corona di Ferro et della Legione d' Onore, Membro dell' Instituto Nazionale Italiano et Professore di Clinica Chirurgica nella R. Università di Pavia. Milano dalla Reale Stamperia. 1809.

THE great progress which surgery has made in the present times, is to be ascribed to the cultivation of pathological anatomy, or exact comparisons between the natural state of our organs, and their various morbid changes, depending upon an alteration of texture, a derangement of functions, a solution of continuity, or a change of situation. There are many operations in surgery, where the operator requires, for their safe and speedy execution, merely anatomical knowledge; but there are others in which the surgeon cannot expect to be successful, even if he is well-versed in anatomy, if he has not paid particular attention to the numerous changes of position, and alterations of structure, of which the parts, which are the subject of operation, are susceptible; for, if he is not well-informed on all these points, his judgment may be misled by false appearances, which may cause him to commit very great, and sometimes irremediable errors. We cannot require a more convincing proof of this fact, than the consideration of the different species of herniæ and their numerous complications. Within these ten years this branch of surgery has undergone many important improvements in this country, and our knowledge has been brought almost to a state of perfection, by the valuable works of Mr Astley Cooper, Mr Burns of Glasgow, and Dr Monro, junior, whose observations have been repeatedly noticed in the course of this Journal. To these we have to add the very valuable work of Mr Lawrence, which we regret we have not had an opportunity of more particularly recommending to notice, having been disappointed by the friend engaged to review that treatise. With these works Professor Scarpa does not appear to have had any acquaintance, and, in the present treatise, we are presented with the result of that accurate anatomist's investigations, unassisted by the labours of his contemporaries in this country. We shall therefore confine ourselves at present to an analysis of his work, and allow our readers to draw the comparison between it and the works of the authors already noticed.

Professor Scarpa has divided his work into five memoirs; the 1st treats of inguinal and scrotal hernia; the 2d of the complication of inguinal and scrotal hernia; the 3d of crural hernia in the male; the 4th, of gangrene in hernia, and of the means employed by nature for re-establishing the continuity of the intestinal canal; and the 5th, of umbilical hernia, and hernia of the linea alba.

In the first memoir, the author, with great accuracy, points out the anatomical structure of the hernial sac, and the other coverings of the protruded viscera, the oblique passage of the spermatic cord through the inguinal canal, and the necessity of attending to that structure in explaining the direction which the bowels take, and their relative situation with regard to the epigastric

gastric and spermatic vessels. He then proceeds to treat of the immediate cause of hernia, and very ably refutes the opinion of Morgagni, and other authors, who supposed the displacement to be owing to a relaxation and elongation of the mesentery, and considers these two phenomena as simultaneous, and depending on the same cause, an interruption of the equilibrium subsisting between the pressure of the viscera against the parietes of the abdomen, and the re-action of these parietes on the viscera which they contain. There are certain parts of these parietes, which, in the healthy state, oppose much less resistance, and re-act more feebly against the pressure from within, especially that space extending from the pubes to the anterior and superior spine of the ilium. This relative weakness is very often the effect of original structure, and may frequently be increased by various external and internal causes. If, in the case of a violent effort, the pressure from within is much augmented, and, assisted by the action of the abdominal muscles and diaphragm, the force is directed against that weak point, and presses towards it the intestine in its vicinity, or the one most disposed to be displaced, the same force must necessarily act, at the same time, on the corresponding portion of mesentery, so that the intestine, passing out of the abdomen, drags that membrane along with it. In confirmation of this doctrine, we observe hernia come on from the slightest causes in children, where the neck of the vaginal coat does not close, or in persons who, from being very corpulent, become thin in a very short time; in women who have born many children, and in persons who play on wind-instruments, or carry great weights. All the viscera have such a tendency to protrude and press against the weakest part of the parietes of the abdomen, that even those which are the most firmly attached by the duplicatures of the peritonæum, are sometimes found in the contents of the hernia. Sandifort and Palletta found in umbilical hernia, the cæcum, with a portion of the ilium and colon. Mauchart, Camper, and Bose, met with the cæcum in an inguinal hernia of the left side; and Lassus saw the left colon pass out by the right inguinal ring.

Formation and Progress of the Hernial Sac.

The precise point where the inguinal hernia most commonly commences, is that which corresponds to the communication of the vaginal coat with the peritonæum in the fœtus, and in the adult, the place where the spermatic cord passes under the edge of the transverse muscle. At this place the peritonæum forms a slight depression, or funnel, increased by drawing the spermatic cord downwards. The subsequent developement of this small bag forms the hernial sac. At first it appears under the lower edge of the transverse muscle, and, following the spermatic cord, it passes along the inguinal canal, and at last passes through its inferior orifice, or inguinal ring. The canal has the figure of a cone, the base of which corresponds to the inguinal ring. In its whole course, the hernial sac, as well as the spermatic cord, follows the direction of the femoral arch. The hernial sac is united to the anterior surface of the spermatic cord by means of the cellular substance covering the peritonæum externally, both during the passage through the inguinal canal, and after it passes out of the inguinal ring; so that the spermatic cord always lies at the posterior part of the sac, with very few exceptions. Where the hernial sac and spermatic cord penetrate the separation of the fibres of the internal oblique, the cremaster muscle is observed on their external surface, and accompanies them out of the ring, when it is converted into a muscular aponeurotic sheath, containing the hernial sac, spermatic cord, and vaginal coat, and accompanying them to the bottom of the scrotum. This muscle sometimes becomes much thickened in old scrotal hernia, and, in some cases, adheres so firmly to the edge of the inguinal ring, that a probe can, with difficulty, be introduced between it and the fleshy fibres. It is not only in the scrotal hernia, but also in the hydrocele of the vaginal coat, that we ought particularly to attend to this muscular covering. In hydrocele of long standing, this covering often becomes considerably thickened, while the vaginal coat retains its natural state of thinness.

As the hernia increases in bulk, the inguinal ring becomes wider, and, in proportion as it expands, it occasions a progressive diminution of the length and obliquity of the inguinal canal, and, when the hernia has acquired an enormous size, the hernial sac and inguinal ring do not form an oblique canal, but a large aperture, communicating almost directly with the abdominal cavity.

Situation of the Spermatic cord.

As long as the hernia is small, we find no change in the situation of the spermatic vessels. The artery, vein, and vas deferens form one cord, adhering firmly to the posterior surface of the hernial sac. But in proportion as the tumor augments, the cellular membrane uniting them to the sac is distended and compressed, and the spermatic vessels are separated, and change their position with regard to the hernial sac, and they are sometimes found spread out and insulated on the posterior part of the sac. The author observes

"That the vessels in general are not much separated at the upper part of the sac, but diverge more and more towards the lower part of it, and sometimes when the hernia is very large, and of long standing, they are no longer on the posterior part, but at its sides, or even on its anterior surface; they are perceived through the cremaster muscle, and form a kind of vascular train, which stops the hand of the operator, at the moment that he is preparing to open the hernial sac."

From the analogy existing between the scrotal hernia and hydrocele, Prof. Scarpa was led to suspect that the same decomposition of the spermatic cord took place in that disease, and the examination of a variety of cases proved the truth of his conjecture; and he relates a case communicated to him by Gasparoli, where the spermatic artery was divided in making the puncture for curing a hydrocele. From this he is led to remark, that in the latter operation the instrument should be plunged into the tumor at a considerable distance from its bottom, a little below its middle part, and on a line which would divide it longitudinally into two exactly equal parts.

Of the Epigastric Artery.

If we reflect upon the manner in which the inguinal hernia is formed, and the mode in which the spermatic cord and hernial sac cross the epigastric artery, we can readily explain the reason of that artery being found on the inner side of the hernial sac; and Prof. Scarpa remarks, that in the great number of subjects affected with hernia, which he has examined, he has met with a very small number where the artery preserved its natural situation at the external side of the inguinal ring; and of this important point he gives the following explanation.

"In examining the cause of this exception, I have observed, in all the persons in whom it occurred, a very remarkable weakness and flaccidity of that part of the abdominal parietes, extending from the pubes to the loins; in all of them the displaced viscera had passed through the aponeurosis of the transverse and internal oblique muscles, not in the vicinity of the iliac region, as usually happens, but at a small distance from the pubes, giving the superior pillar of the ring an extraordinary curvature, disproportioned to the size of the hernia. I further observed that the neck of the hernial sac did not follow an oblique course from the side to the pubes, but that it passed out almost directly from behind forwards. In a word, in these cases, the small *cul de sac* of peritonæum, which constitutes the origin of the hernial sac, had not begun to form under the edge of the transverse muscle, at the place where the spermatic cord passes outwards, but it had pierced the aponeuroses of the internal oblique and transverse muscles, at a little distance from the pubes, and on the inner side of the part where the spermatic cord crosses the epigastric artery. The small hernial sac meeting with the spermatic cord at this place, and becoming attached to it, might pass out at the external orifice of the inguinal canal, without pushing the epigastric artery from its natural situation."

This species of hernia, therefore, is a combination of ventral and inguinal hernia. It has been described by Hesselbach, who calls it *internal* inguinal hernia, to distinguish it from the common inguinal hernia, which he calls *external.* This distinction would be of a great importance to the operative surgeon, if the characters of these two species were as well marked, as that author says, in the different degrees of the disease. The *internal* inguinal hernia, Prof. Scarpa observes, when of a small size, has a peculiar roundness; it evidently raises up the superior pillar of the inguinal ring, and forms a much more considerable elevation of that part than an *external* inguinal hernia of equal size; it does not form a cylindrical tumor in the bend of the groin, and the spermatic cord is always placed at its outer side. But these marks are no longer characteristic when the hernia acquires a large size, and the ring is much dilated; but they ought to be particularly attended to in hernia of a moderate size, as they explain the relative situation of the spermatic cord, and epigastric artery.

After describing congenital hernia, and the double hernia of the same side, which he considers as a congenital, combined with an ordinary inguinal hernia, and the changes which the hernia occasions in the contained viscera, the author concludes this memoir with many valuable remarks on the construction and application of trusses, and recommends that proposed by Camper, where the length of the spring includes ten-twelfths of the circumference of the pelvis.

In the second memoir, Professor Scarpa does not enter into a detail of the steps of the operation for strangulated inguinal hernia, but points out the various complications which may tend to embarrass the operator. In large scrotal hernia, he particularly recommends the making the external and subsequent incisions exactly in the middle of the tumor, to avoid the spermatic vessels, and, for the same reason, he reprobates the practice formerly followed of cutting away the sides of the sac after the viscera are returned. As the stricture very frequently is occasioned by the thickening and constriction of the neck of the sac, he advises the division of the stricture to be made by cutting the sac and inguinal ring at the same time. Fully aware of the dangers attending this step of the operation, Professor Scarpa enters very fully into the discussion of the subject, and offers many very valuable remarks on the different directions given by surgical writers. From the danger of making the incision either inwards or outwards, he points out the safety with which it may be performed,

formed, by cutting directly upwards, parallel to the linea alba, the practice generally followed in this country; and in all cases a small incision only is requisite for procuring the reduction of the bowels. Of the various causes producing strangulation, the author particularly points out the stricture of the neck of the sac, and the danger, in that case, of returning the sac of the hernia. That the gradual contraction of the neck of the sac is the cause of strangulation, may be ascertained by attending to the following appearances:—1. The hernia has appeared in infancy, or in early youth, and at its beginning, instead of forming a slight fulness in the groin, it has descended into the scrotum in a very short time.—2. After having been kept up by a bandage for a long time, it has reappeared suddenly on some exertion.—3. If the neck of the tumor is examined accurately with the finger, the edge of the ring is not felt tense, and applied closely to the viscera.—4. On making an attempt at reduction, the bowels are returned incompletely, and a slight swelling forms above the inguinal ring, which is painful on the slightest pressure, as well as the part of the tumor not returned; if, then, the patient stands up and coughs, the small swelling in the groin disappears, and the hernia re-acquires its former size. After describing the various strangulations formed by the omentum, rupture of the sac, and the *spasmodic* strangulation of Richter, he very ably refutes the opinion of that distinguished surgeon, that the last is caused by a spasmodic contraction of the ring, occasioned by a cramp, communicated from the external oblique, and he observes, that there are sometimes symptoms of strangulation, the cause of which is not seated in the hernia, but in the rest of the intestinal canal; and the best topical remedies will be employed in vain, if, at the same time, recourse is not had to the internal remedies proper for removing the general affection of the intestinal canal, which may arise from spasms, collection of air, or of feculent matter, or from worms. All these causes of strangulation, the author observes, are only, properly speaking, the *predisposing* causes. The only *determining* cause of this accident is in every case the increase of the bulk of the loop of intestine contained in the hernia, either from the sudden descent of a new portion, or the sudden disengagement of a quantity of gas, or an accumulation of feculent matter. The strangulated intestine, forms a more or less acute angle with the portion above the ring within the abdomen, and this angle is the true *efficient* cause of the strangulation. This angle cannot be removed without employing considerable force; and the operation of the taxis will never overcome the obstacle it presents to the reduction, if the surgeon, in handling the tumor, does not succeed in making part of the air, or feculent matter, return into the abdomen. This compression lessening the bulk and hardness of the tumor, at the same time diminishes the angle which it makes, and, as soon as the protruded portion is nearly in the same direction as that contained in the neck of the hernial sac, the reduction takes place.

Professor Scarpa proceeds to treat of another kind of complication in hernia, viz. the adhesions which the displaced viscera form with each other, or with the hernial sac. These he divides into three species, the *gelatinous*, *filamentous*, and *fleshy* adhesions. On the last he bestows a great deal of attention, and offers many ingenious remarks on its formation, and on the different cautions to be observed in operating, which he illustrates with many valuable cases. He also describes very accurately the hernia of the cæcum, points out the marks of this singular species of hernia, describes its treatment, and concludes this memoir with some important remarks on the dropsy of the hernial sac, and on the hydrocele, considered as complications of scrotal hernia.

The third memoir treats of the femoral hernia in the male. This species, the author observes, is much more frequent in the female, from the greater width of the crural arch, and the peculiar shape of the pelvis. From this circumstance, the crural hernia in the male has not been so accurately and attentively described; and the learned Professor having met with a male subject affected with this species of hernia, injected the blood-vessels, and afterwards dissected carefully all the parts concerned in the disease, of which he has given an accurate description, illustrated with an engraving, to point out the relative situation of the parts, which it is of importance to be acquainted with, in order to avoid a fatal hæmorrhage in the operation.

Description of the Crural Hernia.

This species of hernia in the male as well as in the female, is formed in the cellular membrane, accompanying the crural vessels under Poupart's ligament; it passes on the inner side of these vessels, and descends gradually into the bend of the thigh, between the Sartorius, gracilis, and pectineus muscles. This course, Professor Scarpa observes, may be accounted for in a very easy and satisfactory way. For, in examining the ligament of Fallopius, and the opening of which it forms the upper margin, it will be readily perceived that its internal and lower angle offers much less resistance to the descent of the viscera, than any other part of it, especially the external part in the vicinity of the ilium. This portion of it is completely plugged up by the crural nerve and vessels, and by the tendons of the iliacus internus and psoas muscles. The lower angle, besides being the most dependent part of all the lower edge of the abdomen, is only filled by a loose cellular membrane, which easily yields to the pressure of the bowels. In some cases it is difficult to distinguish the crural from the inguinal hernia; the distance between the crural arch and inguinal ring, is only about half an inch, so that when the crural hernia has acquired a considerable size, and its neck has pushed the lower part of the ligament of Fallopius forwards and upwards, the tumor is very near to the pubes, so that it may be mistaken for an inguinal hernia. On this point the author observes, that in the crural hernia we can with difficulty feel the neck of the tumor, or distinguish the edge of the tendinous opening through which it has passed. When it has acquired a large size, its neck is always situated very deep in the bend of the thigh; its body and fundus assume an oval form, and the greatest diameter is in a transverse direction in the bend of the thigh. Besides the symptoms common to every hernia, there are some peculiar to the femoral, such as the feeling of numbness and weight of the thigh, and œdema of the foot or leg of the affected side. The diagnosis of the crural hernia in the female is not so apparent. Indeed the want of the spermatic cord, and the situation of the ring nearer the crural arch, may lead to a mistake; sometimes, even we may suppose that a woman has a double crural hernia; whereas, of the two herniæ approaching very near to each other, the one is inguinal and the other crural. Such a case is mentioned by Arnaud.

Immediately below the skin we find a layer of condensed cellular substance, forming the second covering of the hernial sac. It is generally intersected with small lymphatic glands; it is very flaccid, and may be easily raised with the forceps, and divided without any risk of wounding the subjacent parts. When the patient has worn a bandage it is more firm, and adheres to the third covering, the aponeurosis of the fascia lata. This aponeurotic expansion is of different densities; it is much firmer and thicker towards the outer than the inner part: it adheres firmly to Poupart's ligament; by increasing its strength and elasticity, it draws it towards the lower part, and assists it in resisting the impulse of the viscera, and in preventing their descent. The use of this membranous expansion is easily proved; in the dead subject, if a slight cut is made in it, parallel to Poupart's ligament, the crural arch is instantly relaxed, and retracts spontaneously from the edge of the pelvis; and we do not meet with the same resistance in introducing the finger under the ligament, from within outwards. Every surgeon is aware of the ease with which a femoral hernia may be reduced, by bending the thigh on the pelvis, in consequence of relaxing this membranous expansion. Under this expansion is the *proper* cellular covering of the hernia; it is formed by the cellular membrane lying on the outer side of the peritonæum, and accompanying the crural vessels under Poupart's ligament. In recent small herniæ it is very loose and extensible, and often allows the hernia to return with the sac. It increases in density as the hernia enlarges, but it is never so dense as the cellular sheath lying between the cremaster muscle and sac in inguinal hernia. In fat persons it is often loaded with fat, and assumes the appearance of a bit of omentum. After dividing this cellular covering we come to the hernial sac, which is usually of the same density as the peritonæum, even in hernia of long standing and of a large size. In this, as well as in scrotal hernia, the sac is rarely thickened, except it has contracted adhesions with the contained viscera.

In general, in femoral hernia the coverings of the sac are not so thick and compact as in the scrotal hernia, therefore, a skilful surgeon proceeds with great caution in operating, as the viscera are not so deeply seated as in inguinal hernia.

The situation of the epigastric artery and of the spermatic vessels, with regard to the neck of the hernial sac, is very different in the crural and inguinal hernia. In the latter, the author observes, the hernial sac resting upon the spermatic cord, and following exactly its course from the side to the pubes, passes along with it over the epigastric artery; of course that artery is situated at the posterior part of its neck, as well as the spermatic cord. On the other hand, the sac of the crural hernia beginning to form below the part where the spermatic cord passes under the transverse muscle, and crosses the epigastric artery, this intersection of the epigastric artery and spermatic cord must be placed on the anterior surface of its neck. Arnaud was the first who pointed out the danger of wounding the spermatic artery in the operation for crural hernia in the male; and, from his own observations, Professor Scarpa points out very particularly the dangers attending the division of the Fallopian ligament in the operation for femoral hernia, and considers the ligature of the epigastric artery impossible, in the event of its being wounded; and, indeed, that accident is in general discovered too late for the securing the artery being able to save the life of the patient. He adds,

> "In considering attentively the whole of the crural arch, we find one place, though very small, where the spermatic cord is at a little distance from the ligament of Fallopius; this place is near the internal extremity of this ligament, close to its insertion into the pubes; the inguinal ring being situated higher than the internal and lower angle of the crural arch; it therefore follows, that when the sperma-

tic cord has reached the lower or internal extremity of that arch, it retires a little from its edge, proceeding from below upwards to reach the inguinal ring through which it passes."

It is therefore at this place that the author directs a few slight cuts to be made, when it is found necessary to divide the crural arch. But he is of opinion, that it is not necessary in most cases, if the aponeurotic sheath of the fascia lata be divided parallel to the ligament. He therefore recommends, as one of the most important rules in the operation, both in the male and female, that the external incision of the integuments should be made parallel to the Fallopian ligament; and that it should be of such a size, that on separating the integuments, the aponeurotic expansion of the *fascia-lata* may be divided freely, in proportion to the size of the tumor, and the degree of the stricture.

The author proceeds to point out the mode of operating when the strangulated crural hernia is complicated with *fleshy adhesions*. In some cases, a free dilatation of the neck of the sac, by means of the *dilator* of Leblanc, is sufficient for removing the strangulation; but when the adhesion is of such a nature as to render that dilatation impossible, he is of opinion, that the neck of the sac should be divided in its whole length; and he directs that the incision should be made so that the ligament of Poupart is divided at its inner and lower angle, near its insertion into the pubes, in order to avoid the danger of wounding the spermatic or epigastric arteries.

With regard to the proper bandage for crural hernia, the author remarks that it is still more necessary to be worn after the operation for crural than inguinal hernia, as it is very apt to return. He recommends, as in inguinal hernia, Camper's truss; and mentions the alterations which are necessary to be made in the neck and pad of the truss, that it may prevent the descent of the tumor without impeding the motions of the leg.

The fourth memoir of Professor Scarpa, contains many valuable and important practical remarks on gangrene in hernia, and the artificial anus, one of its most disagreeable terminations. Of the causes of gangrene in hernia, he considers improper attempts at the taxis, especially in crural hernia, as one of frequent occurrence. He divides the strangulation of which gangrene is the consequence, into *chronic* or *slow*, and *acute* or *rapid*, and points out in what cases the operation ought to be performed soon, and when it may with safety be deferred. After these remarks, Professor Scarpa proceeds to the subject of the artificial anus, and the process employed by nature for its cure; and it is with much satisfaction that we have read his very ingenious observations in support of that process, and the refutation of the opinion of former authors. Surgeons generally supposed that after the separation of the gangrened parts, the two orifices of the intestine remain open, and contract adhesions with the lips of the external wound, and that in proportion as it contracts, they gradually approach, and at last form an immediate union, so that the feculent matters pass directly from the superior to the inferior end of the intestinal canal. This theory Professor Scarpa considers as very unsatisfactory, and not consistent with the observations made on the dead body. For he observes, that we always find the two ends of the intestine situated parallel at the side of each other, while the upper end has its orifice directed towards the external wound by the discharge of the feculent matter, and the lower end has always a tendency to contract and to retire into the cavity of the abdomen. From the cases he has met with, the author concludes that nature makes use of a very different process, which has not hitherto been described. This process consists in a sort of membranous pouch, formed by the elongation of the peritonæum, which formed the neck of the hernial sac, and into which both ends of the intestine terminate. The feculent matters from the upper orifice are poured into this sort of membranous cavity, to which he gives the name of a *funnel* (imbuto), and from thence, in describing a half-circle, they are carried into the lower end of the canal. This singular arrangement is proved by several cases, and Professor Scarpa affirms, that it takes place in all patients who have been cured of an artificial anus; and he demonstrates the necessity of this membranous *funnel,* to supply the place of the gangrened intestine. From this important discovery, he shews the difference which takes place in the artificial anus, the consequence of a gangrened hernia, and that which is the effect of a penetrating wound of the abdomen. He then compares the wounds of the intestinal canal, with those of other parts of the body, and observes, that the first never heal, by the immediate approximation of their edges, but by contracting adhesions with the peritonæum near them.

The author afterwards offers some remarks on the disadvantages of too strict a regimen in the treatment of artificial anus, and proves, by some interesting cases, the necessity of nourishing diet, to assist the efforts of nature, to re-establish the continuity of the intestinal canal. He mentions several precautions necessary in the cure of the artificial anus, and points out some cases where it would be dangerous to allow it to heal; and he relates a case of inversion of intestine, where great benefit was derived from the use of a large plug of lint, which the patient wore in the external opening of the intestine.

In speaking of the different methods which have been proposed for effecting the re-union of a divided intestine, Professor Scarpa considers the method of Ramdhor as very difficult, or almost impracticable. In these cases, he observes, nature alone re-establishes better the continuity of the canal, and even seems to prepare, if we may use the expression, for that purpose, before the gangrene takes place, by producing adhesions between the strangulated intestine, and the neck of the hernial sac. He does not even think this method of re-union applicable to wounds of the abdomen, and relies entirely on the resources of nature, which effects a cure free from danger, by making the intestine contract adhesions with the peritonæum, at the edge of the external wound. The author concludes this memoir with an account of a very curious case of rupture of intestine, not gangrenous, in a case of congenital hernia, which had been reduced for a long time, and suddenly reappeared in consequence of a violent exertion.

In the last memoir Professor Scarpa treats of umbilical hernia, and of hernia of the linea alba. He observes that the umbilical hernia is a disease peculiar to infancy. It rarely begins in an advanced age, and when observed in the adult or old persons, it is probable that it existed in early infancy, though it had been overlooked from its small size or the mildness of the symptoms. He further states, that the hernia which forms in the umbilical region in women during the last months of pregnancy, does not pass out precisely by the umbilicus, but in the vicinity of that opening, and two herniæ have been found in the neighbourhood of the umbilicus in the same patient, neither of which have passed out by the umbilical ring. These species of hernia may be distinguished by the following circumstances:

" The first, (the proper umbilical), whether it occurs in an infant or an adult, has a rounded neck or *pendicle*, around which, we feel, with the point of the finger, the aponeurotic edge of the umbilical ring. Its body always preserves nearly a spherical form, whatever its size is. No puckering of the skin can be perceived either at its apex or sides, nor any thing resembling the cicatrix of the umbilicus; only at some points of the surface of the tumor, the skin is a little paler and thinner than elsewhere.

" The hernia of the *linea alba*, on the other hand, has a neck or *pendicle* of an oval shape, as the fissure through which it has passed. The body of the tumor is always oval. If the finger is carried deeply round its neck, the edges of the aperture of the linea alba may be distinguished; and if the hernia is situated very near to the umbilical ring, on one or other of its sides is perceived the cicatrix of the umbilicus which preserves its puckered and all its natural appearances, a sure mark that the viscera have not protruded through the umbilical ring."

This distinction, the author remarks, is of considerable importance in the prognosis, as the latter species is more difficult of cure than the former.

This memoir also contains many important observations on the causes of umbilical hernia; on the proper bandage for their cure; and many ingenious remarks on the means of supporting them when irreducible; as also on the artificial anus, and the great difficulty of curing it; but as this article has already extended to a very great length, and as the information contained in this memoir, does not admit of a short analysis, we must refer our readers for full information to the work itself.

The plates illustrating this elaborate work are ten in number, containing twenty-seven figures the size of life, with corresponding outline plans. Those who have seen Scarpa's former works, will anticipate their unrivalled excellence, and will consider it as sufficient praise to be told that they are drawn and engraved by the Anderlonis; but critics are never satisfied, and always disposed to assume too high a standard of comparison, whether real or ideal. Although, therefore, the least excellent of the tables in this splendid volume, are superior to the *chefs d'oeuvres* of all other artists, they are not of equal merit in themselves. For while some express with admirable truth, the different structures and textures of the substance of the parts represented, others betray some of the hardness common in engravers' drawings, and are too wiry and metallic in their effect. The French copy of these plates, as might be expected, is immensely inferior as works of art, although, perhaps they may be allowed to represent, with sufficient fidelity and perspicuity, the parts described by the author in the course of his work.

IV.

A Treatise on Worms, and other Animals which infest the Human Body; with the most speedy, safe, and pleasant means of Cure. By T. Bradley, M. D. of the Royal College of Physicians, London, Senior Physician to the Westminster Hospital, and the Asylum for Female Orphans, &c. &c. 12mo. pp. 215. With three plates. Underwood, London, 1813.

There are various mechanical methods of book-making, in some of which the operation of the scissars, and the daubing of paste, are better concealed than in others: but we scarcely know which is the most mortifying circumstance to a reader, to discover, on the one hand, when he takes up a new publication, from the pen of a "senior" practitioner, that it contains only a stock of old and familiar materials, newly worked up and varnished, without any acknowledgment of the source whence they were derived; or, on the other, to find a mere avowed reproduction of second-hand goods, with few pretensions to improvement. The little compilation before us is of the latter description. For, in addition to the detail of symptoms, indicating the presence of worms in the alimentary canal, which have been stated in similar terms by all the writers on the diseases of children, the greater part of the work consists of a description of the form and structure of the four ordinary species of intestinal worms, copied from a paper written by Dr Hooper, and published in the 5th Volume of the Memoirs of the Medical Society of London, (art. xxvii, p. 224, et seq.) in 1799; and the plates, which accompany that memoir, are here exactly re-engraved.

This treatise, however, is avowedly of a *popular* character; for it has lately become fashionable for medical practitioners to recommend themselves, as prescribers of physic, under the professed intention of teaching people to prescribe for themselves. In such a treatise, we ought at least to find a detail of the results of the latest scientific researches, and an attempt to correct the vulgar prejudices, which prevail on the subject treated of. But we cannot assert, that the author has evinced an acquaintance with the recent improvements in the treatment of the diseases in question, while he appears to maintain the vulgar doctrine, which ascribes, in our opinion, a great deal more to the morbific operation of these parasitic animals, than experience will justify.

Every practitioner of observation must have remarked the universality of the belief among those who have the care of children, that almost every indisposition, in which the alimentary canal is concerned, originates from the presence of worms. But he must also have remarked, that, in a very large proportion of these cases, (we shall probably not exceed the truth, if we say in nineteen out of twenty,) all the morbid appearances have vanished, under the use of purgative or alterative medicines, without the exclusion of a single worm. What is the inference? Surely, that the symptoms are merely the result of irritation in the intestinal canal, and that worms are only an occasional source of that irritation. This the author is obliged to acknowledge; and he enumerates hydrocephalus, disease of the mesenteric glands, dentition, and other causes, among the irritations that produce these symptoms. But we know not how a mother or nurse is to trust to the guidance of his diagnostics, in which he is inconsistent with himself. For, he tells us in one page, "the surest indications of a watery-head, in children, are lassitude, slight *pyrexia*, pain of the head, a *slow pulse*, and the pupils of the eyes dilated." (p. 16). But in the next page, he informs us that "the difference in the state of the pulse" is an important means of discrimination. "In the dropsy of the brain, the pulse is remarkably *irregular*; sometimes as low as sixty-eight beats in a minute, and often as high as 120 or 150, which is almost too rapid to be counted, varying at different times of the same day." p. 17. Now we venture to say, that no physician ever witnessed such alterations in the same day: there is indeed, at a middle stage of hydrocephalus, sometimes a slowness of the pulse, as Dr Quin pointed out; but when the pulse once attains the extreme quickness, which often greatly exceeds the number of beats mentioned by Dr Bradley, it never again becomes slow. There are many cases, too, in which the interval of slowness of the pulse never occurs: how then is it to be deemed one of the "surest indications" of hydrocephalus?

With respect to the diagnosis between tabes mesenterica and worms, Dr Bradley states only the following loose and incorrect means of ascertaining it. "The peculiar hardness of the belly, nearly resembling that of a board, may, however, be very generally depended on as distinguishing this complaint from those which proceed from worms." p. 20. Now, it is only in the last stage of this tabes that such board-like hardness is to be felt. In its early periods, there is not more perceptible tension of the belly, than in cases of worms, of loaded bowels, or of irritation from morbid biliary secretion.

What then is the author's conclusion, in this state of doubtful diagnosis? Why he *suspects* there must be worms, and orders calomel, followed by rhubarb, jalap, "a *dish* of strong senna tea," or "ten or twelve grains of scammony," in order to get a *sight* of them. "If there are any number of worms, this treatment will expel *some of them*, and at the same time direct us in our future conduct, by shewing with which kind the sufferer is infested." p. 22.

We are informed, that the lumbrici, or ascarides lumbricoides, "are generally *very numerous*; but from *thirty to fifty* is the most *common number*;" that they produce pinching pains in the bowels, "arising, doubtless, from the worms *sucking* and gnawing the inner coats of the intestines;"—that "they sometimes eat holes through them and produce death;" that they "are the only ones that creep out at the mouth and nostrils:" information very judiciously selected to alarm the popular reader.

The indications of cure for the lumbrici, are, first, "to *sicken* them, or render their habitation very uncomfortable;" and then to purge them out. What sickens the patients, our author concludes, (though we do not perceive the accuracy of the logic, as applied to animals that feed on excrement) will sicken the worms: hence he begins with an *emetic.* But if the patient is not made to vomit, he concludes again that the worms are not sick, and repeats the emetics in augmented doses, without "fear respecting the largeness of the dose, because children bear vomiting better than any other age," p. 47. But if the vomits expel no worms, then he tries the other end of the bowels; giving these young patients a *third of a grain* of the *corrosive muriate of mercury,* with three or four grains of calomel, and some rust of iron, on two successive nights, to be cleared off by a morning dose of rhubarb and jalap. "I have *never found this plan fail,*" he says, "to dislodge a *considerable number* of the worms of this first kind," viz. lumbrici. p. 49. He sometimes gives a compound "of resin of jalap, gamboge, scammony, and aloes," to these his tender patients. But "when the patients are arrived at the age of reason, *or* are well disposed *to be obedient,* the following pills are recommended, from much experience." (51.) These pills consist of the corrosive muriate, and the submuriate of mercury, with sulphate of iron; and the dose is *half a grain* of the sublimate, and two grains of the calomel, morning and evening. At the same time he prescribes a draught, morning and evening, for two days, containing six drops of Fowler's arsenical solution, with two drachms of tinct. of gentian, and one of tinct. of quassia: and this also is to be "purged off" by from six to ten grains of calomel, or the other means.

We should almost apprehend, if this were not taught by an hospital physician, that, as the worms were at first sickened by sickening the patient, so they were at last to be *poisoned,* by a corresponding process. In truth, we think this a most hazardous and reprehensible system of prescription to be put into the hands of nurses, and other domestic practitioners; and more especially as it is concluded by an assertion of its infallibility, which we would not make respecting any article of the materia medica, in any complaint. "This treatment," Dr Bradley declares, "has *never* deceived my expectations; and if it has not expelled all, it has, even on the first use of it, *always* evacuated *many* of these intestine enemies." Nay, so confident is he of this infallibility, that he offers to publish any case of failure, that may be transmitted to his publisher.

Passing to ascarides, the author still exaggerates both the number and the frequency of their occurrence, representing man as worm-eaten from his cradle. "Perhaps very few persons pass through childhood without some of them." p. 59. Dr Hooper had mentioned that considerable numbers of these ascarides were often discharged by an individual: but here Dr Bradley enlarges upon his prototype, and tells his readers, that "they are commonly very numerous, that is, *many thousands* in one patient." p. 58.

When the ascarides inhabit the stomach only, although no means of ascertaining their existence in that viscus are pointed out, the author recommends the same sickening treatment as in the case of lumbrici; "especially the antimonial emetics:" and as the creatures are apt "to bury themselves in the mucus," they "may require a longer course, and more frequent repetitions of the same medicines." p. 63. And here he considers the cowhage, "prepared by Mr Chamberlaine in the form of an electuary," as particularly efficacious, and gives us, *en passant*, this piece of gratuitous information; videlicet, that Mr Chamberlaine "is *convinced* that *good treacle, such as is to be had at any grocer's*, is the best vehicle for this, *as well as for flowers of sulphur*:" and moreover, that, "if *a child should be found* who has an aversion to treacle, *jam*, or *some jelly may be employed* instead of the treacle." p. 63. For which profound communications, we hold ourselves obliged to the 'grave, sad, and groundly-learned' author.

But when ascarides lodge in the rectum, they are more easily destroyed, by the direct action of glysters, containing aloes dissolved in milk, or "the milk of gum asafoetida, or of gum sagapenum," or castor oil with the latter, or ice-water. If these remedies should fail, then "some skilful physician should be consulted, who will know how to administer *solutions of calomel* with *arsenic*, or with *corrosive sublimate*, in clysters, which *never will fail* to destroy these vexatious vermin." p. 69. And here the author introduces a very convenient remark for all nurses and worm-doctors, who will henceforth never fail of testimony in favour of their infallible worm-killing purgatives and emetics, as long as these drastic drugs continue to evacuate slime and mucus from the irritated intestines; for the appearance of the worms *in propria personâ* is not requisite for their proof!

> "It sometimes happens," says our author, "much more frequently than is suspected, that when worms *in great numbers* have been *destroyed* in the stomach and bowels, they *get dissolved* or broken down, and pass off with the stools in such small pieces as *not to be noticed*.—Complete recoveries from the symptoms which *unequivocally indicate the presence* of these worms, have taken place, after the exhibition

tion of the worm-destroying remedies above recommended, alternated with purgatives, and yet *not a worm*, in its *proper form*, has been observed to be discharged."—p. 71.

Upon such proofs as this, might it not be demonstrated that worms were the cause of colic, dysentery, and enteritis, though not a worm "in its *proper form*" were seen among the excrement?

Having laid Dr Hooper again under contribution for a description of the two species of tænia (as well as of the trichuris, which is briefly noticed,) the author "comes next to the most difficult part of his task, the cure of the tape-worm. 'Hic labor, hoc opus est.' This is a work and a task indeed. Even Mr Chamberlaine's grand specific (cowitch) fails here." p. 87. Yet Dr Bradley soon loses sight of these difficulties! He gives "a drachm of opiate confection at tea-time, and at bed-time a drachm of iron or steel filings, with six grains of calomel."—"On the morrow," he adds, "I give half a drachm of jalap, with 5 or 10 grains of rhubarb: and *I never have seen a case* in which this plan *has failed* to bring away a very considerable quantity." p. 98. But he considers the tin powder, given in the same manner, as more powerful than the iron. "I consider the remedy last recommended, as so powerful, that very few cases, I believe, will occur in which it will not prove successful." p. 94.

After mentioning the fern-root, the seeds of Mexican barley recommended by Schmucker, and one or two other remedies, he concludes with the following brief, and erroneous notice of the spirits of turpentine. "Spirits of turpentine are a powerful remedy against this worm, in a dose of *two drachms*, but it cannot be continued on account of the *effect on the kidnies!*" p. 99. Now it seems somewhat extraordinary, that a physician, even one whose attention was not attracted to a subject by the interesting occupation of writing a treatise on it, should be so little acquainted with the proceedings of his contemporary practitioners, as to mention an important remedy thus briefly, and thus incorrectly, and to have omitted to put it to the test of his personal experience. The spirit of turpentine, which was introduced to the notice of practitioners by Dr Fenwick of Durham,[*] and of the superior efficacy of which, in the destruction of the tape-worm, many practitioners have since given their testimony,[†] has been administered in fact in doses of *half an ounce*, and from that up to *two ounces*; it has not, in these large doses, affected the urinary organs, as it was imagined that it would; neither has it been found necessary to " continue" it, like the remedies usually employed.

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[*] See his letter to Dr Baillie, in the Medico-Chirurgical Transactions, Vol. II. p. 24.

[†] See the Reports of the Carey-Street Dispensary, in this Journal, Vol. VI. p. 253, VII. 238; and Dr Laird's letter, Vol. VI. 376; also Transactions of the Medical Society of London p. 1., and the London Med. Review.

The author now passes to the subject of " external insects," and gives a brief and common-place compilation relative to the dracunculi of warm climates, to lice, and to the itch. We were not a little surprised by the evidence of his skill in natural history, exhibited under the last mentioned head, as well as of his information concerning the habits of the insect in question.

" And last, though not least in torment, is that very small insect of the *beetle kind*, which is the cause of the itch. This animal appears to have the same power and facility of burying itself in the skin, as *large beetles* have of burying themselves in the ground, &c." p. 121. Again, " At first there appear small pimples with watery heads, which itch very much, on account of the motion of the *little beetle*, or *tortoise* (which it very much resembles) &c." p. 122.

Now, from the days of Moufet the insect, which is sometimes found on persons affected with the itch, has been well known to naturalists, as an *acarus*, having as little relation to a crustaceous and winged beetle, as to a tortoise or a sea-horse. Neither is it admitted as the general cause of the disease, or as generally present in it; and where it has been found, it was not burrowing, like a beetle, *in* the pustule, but near it;—as the accounts given by Bonomo, Mead, Linnæus, &c. have taught us.

The volume is eked out by an appendix, " intended for medical readers," which contains Dr Hooper's anatomical account of worms; preceded by minute and ingenious directions for making *beef-tea*, both for children and adults; and followed by biographical sketches of Hippocrates, Celsus, Scribonius Largus, and Cælius Aurelianus (the last two of whom are said to have been contemporaries!) with a scanty account of their observations relative to intestinal worms.

We have dwelt far too long upon this meagre and incorrect performance, unwilling to condemn, without ample evidence, the production of a writer whose titles seemed to claim our respectful attention. But since a notable treatise on the subject of diabetes attracted our review, we have not been called upon to notice a publication, in which so great a disparity has been manifest between the promise of the title-page, and the subsequent contents.

V.

A Botanical Materia Medica, consisting of the generic and specific characters of the Plants used in Medicine and Diet, with Synonyms, and references to Medical authors. By JONATHAN STOKES, M. D. in 4 Vols. Vol. I pp. lxviii and 503. Vol. II. pp. 567. Vol. III. p. 549. Vol. IV. 701. 8vo. London 1812.

IN acknowledging that the present publication disappointed us, we are conscious that we are in fault, more than its learned and industrious author. From the leading part of the title, we expected an account, at least, of the virtues and uses of medical plants, or something of the science usually meant by *materia medica*; but the explanatory part of the title, which correctly describes the nature of the work, should have undeceived us. Woodville's publication was really a "Botanical Materia Medica;" the work before us is better entitled to the denomination of "Medical Botany."

As such it scarcely comes within the scope of this Journal; yet our esteem for its author induces us to notice its general plan. We shall give some idea of the excessive industry of Dr Stokes, when we state, that the list of works consulted and quoted by him occupies no less than 32 closely-printed pages, and comprehends nearly 1200 publications. The rest of the introduction consists of a synopsis of the classes and orders. The arrangement of this synopsis does not accord with that of Linnæus, nor with the plan followed in the work itself, but is peculiar. It serves, however, as a table of contents, by a reference being affixed to each order, indicating the page and volume where it is to be found. The following abstract will give an idea of Dr Stokes's classification.

> "I. Flowers if existing either not found, or so minute as not to be distinguishable without highly magnifying microscopes.
>
> Class 23. Cryptogamia. Orders, 1. Monoecia, 2. Dioecia, 3. Gynoecia.
>
> II. Flowers with stamina on one plant, and flowers with pistils on another.
>
> Class 22. Dioecia.
>
> 1. Male flowers, stamina united. Order 14. Syngenesia, 13. Monadelphia.
>
> 2. Male flowers, stamina distinct. Orders, 1.—12. Monandria—Polyandria.
>
> 3. Female flowers. Orders, 1.—7. Monogynia—Polygynia.

III. Stamina and pistils on the same plant, but not in the same flower.

Class 21. Monoecia.

1. Male flowers, stamina united. Orders, 12. Syngenesia, 11. Monadelphia.

2. Male flowers, stamina distinct. Orders, 1.—10. Monandria—Polyandria.

3. Female flowers. Orders, 1.—4. Monogynia—Polygynia.

IV. Stamina and pistils in the same flower. Stamina inserted into the pistil.

Class 20. Gynandria.

V. Stamina and pistils in the same flower. Antherae united by their margins, forming a kind of cylinder.

Class 19. Syngenesia. Order 1. Monogamia, 2. Polyg. superf. 3. Polyg. Frust. 4. Polyg. Necess.

VI. Stamina and pistils in the same flower. Filaments united.

Class 16. Monadelphia. Orders, 1.—9. Monandria—Polyandria.

Class 17. Diadelphia. Order 1. Hexandria. Order 2. Decandria.

Class 18 Polyadelphia. Order 1. Decand. 2. Dodecand. 3. Icosand. 4. Polyand.

VII. Stamina and pistils in the same flower. Stamina distinct.

Class 1. Monandria.
2. Diandria.
3. Triandria.
4. Tetrandria.
14. Didynamia
5. Pentandria.
6. Hexandria.
15. Tetradynamia.

Class 7. Heptandria.
8. Octandria.
9. Enneandria.
10. Decandria.
11. Dodecandria.
12. Icosandria.
13. Polyandria."

Besides the characters of the classes and orders, the synopsis contains the characters of individual genera, whenever Dr Stokes has seen occasion to make any alteration upon them, as inserted in the body of the work; and also the characters of the genera, whenever these are established upon principles different from those followed in the body of the work. Thus, in the latter, the characters of the genera of the classes Monoecia and Dioecia are, as usual, derived from the male flowers; but, in the synopsis, Dr Stokes has also given their characters, as established from an examination of the female flower. This we consider a very essential improvement upon botanical systems, because, although it undoubtedly gives two distinct places to each of these genera, still there is not any real disadvantage in this kind of repetition, and, without it, we cannot proceed one step in analyzing and classing a plant, of which we have only specimens of female flowers before us. Besides, by examining a plant under the varied relations under which it appears in this double arrangement, our knowledge of it cannot but be confirmed and extended.

Dr Stokes has given the utmost extent to his Botanical Materia Medica, and has included in it all the genera 1021, species, varieties and variations which have ever been mentioned as affording articles of medicine or nourishment. In establishing his genera and species, as well as in describing their characters, Dr Stokes does not adhere slavishly to Linnæus, or any of his editors, but adopts improvements wherever he has been able to find or make them. It may seem strange to doubt, the propriety of introducing these improvements, but we are convinced our doubts are not unfounded. It is not in a Botanical Materia Medica, however extended, that botany will be studied, and, by deviating from the established systems of botany, however right in point of fact, such a work becomes, in a certain degree, less useful, and certainly less easily consulted. The following quotations from the dedication, will explain the grounds upon which Dr Stokes has made some of the alterations, while they, at the same time, shew, that he does not intend his work as a mere application of botany to another science, but of a higher order, and calculated to improve the science of botany itself.

" The terms made use of are generally those of Linnæus, or formed on his principles; but in the grasses it may be necessary to observe, that what Linnæus calls the calyx I consider as bracteæ, and what he terms corolla I regard as the calyx. In describing the calyx I have also substituted the word phyllum for foliolum, confining the use of foliole to the subdivisions of leaves. The compound flowers, as they are generally termed, contained in the class Syngenesia I have called anthodia, considering them as collections of flowers analogous to those of Scabiosa and Jasione. And instead of calix communis and squamæ I employ the terms involcurum and bracteæ.

" I make no apology for these or other deviations from common usage, holding it to be the duty of every writer who publishes, to communicate all he knows on the subject of which he treats. If convinced by others, or my own reflections, that such deviations are errors, I trust I shall have courage to retrace my steps.

" Since I wrote the advertisement prefixed to the 2d edition of the Botanical arrangement, my opinions respecting trivial names have almost entirely changed. Improvements in nomenclature will keep pace with increasing knowledge, and where a name is susceptible of amendment, every botanist should be as ready to suggest a better, as to communicate an improved specific character or description. I do not approve of altering every name which is not good, thinking it better to use the bad one till we discover one which is characteristic. In some genera the difficulty of finding good names is so great, that we must be content with their having names at all. In adopting one of two or more names given to the same plant by contemporary authors we ought always to give a preference to that which is most characteristic."

"When I have referred a species to a distinct genus and only one species is found in that genus, I have not followed Linnæus in endeavouring to discover a characteristic name, but have judged it more advisable to give it a name expressive of its being the only known species, and a name which must inevitably be changed whenever another shall be referred to the same genus.

"In the course of this work I have been led to distinguish between a variety and what I have sometimes called a variation. When plants are so much alike that one entertains no doubt of their specific sameness, and yet differ in colour, size, or mode of growth, I am inclined to call those that assume the form or colour which is least usual a variation. When plants are so little alike that we almost begin to suspect them to be specifically different, and yet on a careful examination are not able to fix on sufficient marks of specific distinction, I call that form which is least usual, a variety."

It only remains to state in what manner Dr Stokes treats each article. He gives 1. The generic character.—2. The specific character, with references to authorities and plates.—3. Botanical synonimes and references.—4. His own observations, if he has examined it.—5. Its pharmaceutic synonimes, with references to pharmacopoeias, and medical and pharmaceutic writers who have spoken of it, and, for facility of reference, the authorities are always arranged in alphabetical order. All these are uncommonly full and correct, so far as even to state what figures are reimpressions of others, that when we have seen one, we may be spared the trouble of consulting others. In regard to our author's own observations, the following note is worthy of quotation, and the practice described in it, of imitation.

"The figures subjoined to botanical observations refer to the numbers of a journal which I have kept ever since I began to investigate plants, my specimens having corresponding numbers affixed to them. The benefit I have experienced from this method induces me to recommend it to all students of natural history, advising them to incorporate all other observations which they may commit to writing into the same series, affixing corresponding numbers to specimens of all kinds, and to plants growing in their gardens, numbers stamped on plates of lead by means of steel dies, as practised by florists. To these observations I have an index, which, consisting of separate papers arranged in a book, admits of occasional additions without the labour of transcription."

From what we have already said, our opinion of this work may be easily anticipated. We wish that the author had extended his plan a little, so far, at least, as to have communicated his researches and opinions more fully, in regard to the plants producing gums, barks, &c. about which botanists are not agreed, and pharmacopoeias differ; but in justice to our respectable author, we must say, that what he intended to do, he has performed with great ability and infinite industry. He has put us in possession of a complete system of medical botany, with the synonimes of each plant, and copious references to the botanical, pharmaceutical, and medical authors, by whom it has been noticed.

VI.

Nosographie Philosophique, ou la Methode de l'Analyse appliquée a la Medicine. Par PH. PINEL, Médecin consultant de Sa Majesté l'Empereur et Roi, Membre de l'Institut national et de la Légion d'honneur, professeur à l'Ecole de Médecine de Paris, et Médecin en chef de l'Hospice de la Salpêtrière. Paris, 1810.

"Une maladie étant donnée, determiner son vrai caractère, et le rang qu'elle doit occuper dans un tableau nosologique." Such is the truly important question which M. Pinel has proposed for investigation. And were we to be determined by the title and general tone of his performance, we should be induced to suppose, that he had accomplished his undertaking to entire satisfaction. We have not indeed in express words, "non dubito me solvisse nobile problema," but we find their import implied in every page. It is by no means our wish to detract from the real merit of M. Pinel, for a novel and ingenious attempt to improve a part of medical science, at once the most important, difficult, and defective. But we are constrained to confess, that we are overcome by his constant censure of others, and commendation of himself; his incessant digressions to expose the hypotheses, dogmas, and follies of the schools, and to display the noble substitution of his own analytic method and philosophy. In the very commencement of his work, we read, "que d'efforts laborieux et multipliés n'ont point faits Sauvages, Linné, Vogel, Cullen, Sagar, Nietzki, Selle, Ven-Denheuvell, etc. pour distribuer toutes les maladies connues en classes, en ordres, en genres, en espèces, à l'exemple des botanistes! et quel résultat ont-ils obtenu? une extrême surcharge du tableau, une classification arbitraire et vacillante, des affections symptomatiques prises pour des maladies primitives, une multiplication excessive des unes et des autres par des complications sans nombre des maladies, &c." With what degree of patience or forbearance can we regard the production of an author, who thus, with as little discrimination as justice, condemns at once as useless, nay as detrimental, the labours of predecessors, whose names have been the boast and ornament of our profession, and will continue so, long after that of Pinel has sunk into oblivion.

And, is the period indeed arrived, when our own Cullen is reproached with having burthened nosology with symptoms substituted for real diseases, and with complications of diseases without number? Let the candid and impartial reader consider the gentle criticism of this estimable author, on the needless prolixity and refinement of Sagar, in this particular; * let him read his own fears, lest, in attempting to diminish the number of genera of diseases, he should have perplexed, rather than have simplified his subject; let him observe, that the number of genera is really much lessened, and the whole subject reduced to a simplicity, unprecedented, perhaps unwarranted: he will then be fully prepared to judge with what propriety the observation quoted is applied to him by an author, who, in one single page, enumerates as distinct genera of disease, cardialgia, vomiting, and pica; and who continually multiplies the number of diseases by every trifling addition or complication †.

M.

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* Nosologiam adeo frivolis onerare, vel tam multis novis et inutilibus appellationibus turbare minime idoneum videtur. Judicet itaque actor, quam merito gloriatur Cl. Sagar, se generum numerum auxisse. Synops Nosol. Meth. Prolegom.

† In complete illustration of the latter circumstance, we must beg leave to anticipate our analysis so far as to present to the reader a view of the order of fevers termed by Pinel "ataxiques."

Ordre V. Fièvres ataxiques ou malignes.
Genre XI. Fièvre ataxique (maligne) continue.
Especes simples.
1st Varieté. Fièvre lente nerveuse.
2d Variété. Fièvre cérébrale.
Especes Compliquées. Fièvre ataxique inflammatoire continue.
Fièvre ataxique bileuse continue.
Fièvre ataxique muqueuse continue.
Fievre ataxique adynamique continue.
Fievre ataxique gastro adynamique continue.
Genre XII. Fièvre ataxique remittente.
Especes Simples. Aussi *multipliées* qu'il y a de lesions differentes.
Especes Compliquées.
Genre XIII. Fievre ataxique (pernicieuse) intermittente.
Especes Simples. Aussi *multipliées* que les troublés qui predominent.
Especes Compliquées.

To these genera and species must be added, the subdivisions of six other orders of fever, before an adequate conception can be formed of the degree of subtlety and refinement which M. Pinel has attained in this way. Such nosology as this can only serve to remind us of the ingenuity which some men have displayed in the ringing of changes; or of the algebraical doctrine of permutations and combinations.

M. Pinel has not distinctly defined the object of his work, or of nosology. This term is generally, and perhaps properly, understood to imply the classification and description of diseases, with a view to promote their diagnosis. This, however, is not the import of the word *nosographie*, employed by M. Pinel. The work before us comprises not only the arrangement and definition of diseases, but also their causes, nature, history, and cure; forming, in fact, a system of the practice of physic, as well as of nosology, properly so called. We could adduce satisfactory reasons for separating these two departments of medical science; but we proceed at present to the consideration of the Nosographie Philosophique.

The principle of arrangement which M. Pinel has adopted, is that which arises from the consideration of organic structure and function. The *texture* of the part affected generally determines the order; and the relative situation of parts, or the character of the disease, the genus under which any given species is disposed. Thus there are five orders of the Phlegmasiæ as a class. 1. The Ph. cutanées; 2 Ph. des membranes muqueuses; 3. Ph. des membranes sereuses; 4. Ph. du tissu cellulaire et des organes parenchymateux; 5. Ph. des tissus cellulaire fibreux, et synovial.

In this place we cannot refrain from noticing the pretensions which our author makes to the merit of having originally drawn the attention of medical men to the differences of texture, function and disease, in the various parts and organs of the animal frame. He observes: "Sans trop prejuger de l'influence de ma première édition de la nosographie, ne lui doit on point la suite nombreuse des recherches que Bichât a faites dans ces derniers temps?" But M. Pinel is not the only one who has arrogated to himself the honour of John Hunter's discoveries.

As a foundation of nosological divisions, we cannot but regard the varieties of texture in the animal body as manifestly improper. For, in the first place, in no instance is it possible to predicate of any disease, that it is an affection of a particular structure; and 2dly, even if this were possible, the associations and divisions of disease to which it would give rise, would by no means be the most natural. On the same principle of structure, M. Pinel has attempted some innovations in the nomenclature of fevers; but if it be impossible, in local diseases, to say in what particular structure the affection subsists, it is surely less to be expected that this can be done in a general fever. Each of these observations, we shall proceed to illustrate and confirm, by having recourse for exemplification to the Nosographie Philosophique.

M.

M. Pinel has instituted seven orders of fever, which are thus denominated: 1. Fièvres angioteniques. 2. F. meningo-gastriques. 3. F. Adenomeningées. 4. F. Adynamiques. 5. F. Ataxiques. 6. F. Adino-nerveuses. 7. F. Hectiques.

"The first order denotes a particular affection of the sanguiferous system; the second has for its object, a special irritation of the stomach, duodenum or adjacent parts; the third indicates, that the irritation chiefly affects the mucous membrane of the alimentary canal; the fourth adds to the consideration of the changes produced in this canal, that of an impression of debility or atony in the irritability of the muscles; the object of the fifth is a profound lesion of the irritability and sensibility, characterized by nervous symptoms of the most dangerous tendency; lastly, the sixth adds to the characteristics of the last order the particular circumstances of mortality, contagion, and a simultaneous affection of the glands.*"

Now, to say that the ephemera or synocha, (if indeed such a fever do really occur,) is an affection of the sanguiferous vessels, is to confine the attention to one part of the character of the disease, and to forget that the head and chest, and more especially the stomach and bowels, are also often implicated in the disorder. Nor is it proper to consider this, rather than many other fevers, idiopathic, and symptomatic, as an affection of the sanguiferous vessels only. We have the same objection to the designation of the second order; we should regard the bilious affection as, in general, superadded to an original fever, which it may modify certainly, but which cannot surely be regarded merely as the subordinate or secondary disorder. Besides, it is a derangement in the function of the liver, which precedes and induces the disorder of the stomach and bowels: it is from this affection, therefore, rather than from the vomiting or diarrhœa, which are in a double point of view secondary, that the fever ought to be designated. Concerning the fievres adenomeningées, there appears little necessity for the institution of such an order at all; and we confess we were a little surprised to find the slow nervous fever of Huxham, quoted as an example. The author confesses, that this fever belongs rather to the order termed *ataxiques*, than that under consideration; but he has a convenient mode of finding exemplifications of more than one order or genus in the same individual fever †. We may refer to the further account given by M. Pinel of the mucous fevers, for conviction how little it is to be regarded as primarily or principally an affection of the mucous membranes of the alimentary canal.

Beyond the third order, M. Pinel appears to have discovered the impossibility of applying his principles to the nomenclature of fevers; and to have relinquished the attempt. The two succeeding orders are not named from the particular structures supposed to be affected, but from other circumstances in their character, loss of power, and irregularity of symptoms. The sixth order, the plague is denominated *adenonerveuse*, being a revival or continuance of a word which has scarcely any definite meaning when applied to fevers *. The last order is, like the fourth and fifth, without any new name.

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* Introduction, p. xviii.

† Vide p. 89, 189, 201, T. I.

In the second class, ophthalmia, cynanche tonsillaris, enteritis, &c. are regarded as inflammations of the mucous membranes of these several parts; phrenitis, pleuritis are considered as inflammations of serous membranes; cephalitis, peripneumonia, carditis, hepatitis, &c. as inflammations of parenchymatous substances. Now, concerning all these affections, it is observable, that, although the particular textures signified be certainly inflamed, yet the inflammation is by no means confined to those textures. In ophthalmia, the inflammation too frequently attacks the fibrous as well as the mucous texture; cynanche tonsillaris is rather an inflammation of the substance, than of the covering merely of the tonsils; enteritis is certainly more generally an inflammation of the serous than of the mucous membrane of the intestines. Dr Cullen has long ago observed, that phrenitis and pleuritis, genera of the third order of our author, can by no means be distinguished from cephalitis and pneumonia, the corresponding genera of the fourth order. They are probably always in a greater or less degree combined; certainly pass insensibly into each other; fully evincing the inconvenience of a system, in which they are disposed, not immediately together, but under separate orders.

In a former edition of the Nosographie Philosophique, a division of lymphatic diseases was instituted; but it appears M. Pinel has here also discovered the insufficiency of our knowledge to the completion of such a plan; instead, therefore, of consigning the cachexiæ, and some other diseases, to derangements of the lymphatic system, he has chosen to denominate them by a more general term.

It is unnecessary to pursue this subject any farther. We shall proceed to a point of equal or more importance, namely, to shew that, even if we could distinctly trace particular diseases to particular textures, yet that the arrangement of diseases, thus conducted, would be far from the most natural or advantageous.

"Placer toujours à cote les uns des autres les objets qui se rapprochent par le plus de points de contact;" this is the object which M. Pinel has had in view in the institution of the Nosographie Philosophique, and it is indeed the important design of all classifications in natural history. We are concerned to observe, that this design is far from being accomplished in the work before us. To take an instance from the diseases previously mentioned, what affections can be more nearly allied, than catarrh, pneumonia, and pleuritis? Yet these are not only considered as distinct genera, but are also arranged under separate orders; so that admitting that they are really allied, it is scarcely possible to dispose them at greater distances from each other. The same observation applies to phrenitis and cephalitis; no one can distinguish them in practice; they are usually found conjoined on dissection; still they are arranged as separate genera, under separate orders.

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* Cullen, Syn. Nos. 72, 182.

There are few diseases more similar in symptoms than hypochondriasis *, hysteria, convulsions, and epilepsy; these diseases, however, are all disjoined, and classed under distant orders, apparently rather from the consideration of their supposed causes, than of their symptoms. Hypochondriasis is arranged with madness; hysteria with nymphomania; convulsions with tetanus; epilepsy with apoplexy. Phthisis pulmonalis is classed with cancer, and cancer with gangrene; and, as if to complete the climax of incongruity, hæmorrhoids are associated in the same order with aneurism of the heart and aorta.

Having thus shewn, that it is impossible to found the nomenclature and classification of diseases upon the consideration of the textures injured; and that, if such an arrangement were possible, it would by no means be the most natural,—we shall proceed to examine the plan of the Nosographie Philosophique, such as it is.

Of the fevers, as we have before stated, there are seven orders, according as they may be inflammatory, bilious, mucous, adynamic, irregular, the plague, or hectic. Of each order, at least of the second, third, fourth, and fifth, there are three genera, distinguished by the continued, remittent, or intermittent type. For M. Pinel regards as of inferior importance, the real and essential distinction arising from the diversity of type, and, we may add, of cause and cure, whilst the circumstances of an affection of the liver, or bowels, or irregularity in any particular, which, at most, can only be regarded as accidental, are esteemed of sufficient moment to afford the ground of distinction into orders. Now, the same species of fever which has what are termed the mucous

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* Vide Heberden, De affectu hypochondriaco et hysterico.

mucous symptoms in spring, may be bilious in summer, adynamic in autumn, and inflammatory in winter; thus becoming an instance of four of the orders or superior divisions, from the mere circumstance of change of season. It may indeed be also urged, that intermittent fever has been known to change its type and become remittent or continued; still the most general type is the intermittent, and this is often recovered during the progress of the fever. The source and cure of the fever are known to be, in a general point of view, invariable *; and indeed no one will argue, that the type of a fever varies from accidental circumstances, in the same sense as we have shewn that fevers vary with regard to the symptoms of deranged liver, or bowels, or accidental irregularities.

We may here observe, too, that, from the plan of this system, an intermittent fever, to obtain a place at all, must be bilious, mucous, malignant, or in some way irregular. Where, then, are to be disposed our vernal intermittents, which, fortunately, are without any of these untoward symptoms? We would ask, is this the effect of the analytic method, so often vaunted as the foundation of the present system, that the simplest instance of fever does not find a place? And yet M. Pinel speaks in the following manner on his arrangement of fevers. "Il faut commencer par les idées les plus faciles, et s'elever ensuite par degrés aux idées les plus simples et les plus composées. Condillac: C'est la l'unique artifice dont je fais usage pour la classification des fièvres."

Having premised these observations on the arrangement of fevers in the Nosographie Philosophique, we shall bestow a few remarks on the fevers themselves, which M. Pinel has thought proper to regard as distinct genera.

The first order is that of inflammatory fever, and, notwithstanding all that has been said in opposition to the opinion, we cannot but agree with our author, that such a fever does really occur, and therefore ought to have a place in nosology. Instances of this kind of fever have occurred to us in practice; for a description of its symptoms, we need only refer to the work before us:—a strong pulse, beating of the temporal arteries, flushed face, acute pains, dry cough, epistaxis, &c. are the symptoms. The fever frequently terminates in a few days, especially on the supervention of the last-noticed symptom, or of some other hæmorrhagy.

The second order comprehends the bilious fevers;—fevers which really occur in this climate †. Under this head, there is a

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* Consult Willan's Reports of the Diseases of London, Preface, p. v.
† See Willan's Reports.

a subjoined genus of disease, denominated "Embarras gastrique," which is subdivided into three species: 1re, Embarras stomacal; 2de, Emb. intestinal; 3me, Cholera morbus [*]. These affections may exist with or without fever. When with fever, they communicate to it the character and denomination of bilious; the fever itself may be continued, remittent, or intermittent. We have objected to this mode of instituting distinct genera of disease, but we approve of these views concerning the *nature* of bilious fevers.

The fevers of the third order are denominated mucous, from the circumstance of pituitous purging and vomiting, with a loaded tongue and a mucous sediment in the urine being superadded to the common symptoms of fever. An ordinary diarrhœa, or vomiting, or a mucous dysentery, may perhaps have the same relation to the mucous fever, as the embarras gastrique bears to the bilious. It is remarkable that M. Pinel did not also observe this analogy. The slow nervous fever of Huxham is cited as having some of the symptoms of the mucous fever [†]. If the stomach and bowels be subjected to the irritation from worms at the time the fever commences, the disease is termed fièvre muqueuse vermineuse.

The fourth order is synonymous with the typhus of Dr Cullen. The propriety of instituting a putrid remitting, and especially of a putrid intermitting fever, is certainly questionable [‡].

Nothing can be more vague and indeterminate than the fifth order of fevers. Its character is, as its name imports, irregularity, occasioned by the occurrence of any anomalous symptoms, or want of conformity in the appearance, continuance, or return of symptoms. But this order has already afforded occasion for animadversion:—it is needless and painful to revert to it.

The sixth order contains the plague, and a last, and unenumerated order, hectic-fever, puerperal-fever, and the sweating-sickness.

The second class comprehends the phlegmasiæ. Under this term, however, besides the phlegmasiæ of Dr Cullen, the *phlegmasies cutanées*, or exanthemata, are included. By this mode of arrangement the same objection is incurred, which has been urged with so much justice against the arrangement of Dr Cullen, by Dr Wilson. The exanthemata are allied in most essential points to continued fevers, and are essentially distinguished from the inflammations. The general fever is entirely idiopathic, neither occasioned nor dependent on the cutaneous affection, which indeed appears subsequently to the fever; whereas, in the proper phlegmasiæ, the fever not only succeeds, in general, to the local affection, but is immediately induced by it, deriving from it its degree of intensity and violence. How erroneous, therefore, is it to separate the exanthemata from the idiopathic fevers, and to associate them with complaints, the fever of which, is, in every respect, symptomatic.

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[*] See Vol. I. p. 46, 47. Vol. III. p. 568.

[†] See Vol. I. p. 89, also p. 94. [‡] Vol. III. p. 565.

Nay, in one instance, the affection, which is to form the foundation of the division, never appears at all; for it is now well known, that the scarlet sore-throat, together with fever, may take place without any cutaneous efflorescence *.

It is also of importance, that the character and arrangement of any disease may depend on the symptoms which first make their appearance. It may be of moment to know, previously to the eruption of pustules, that it is the fever of variola with which the patient is afflicted; and this fortunately can frequently be done. Whether, therefore, we regard the real nature of the exanthematous diseases, or the promotion of a practical object, we shall be led to consider that arrangement as most proper and beneficial, which proceeds on the consideration of the symptoms of the *fever*, the *first* symptoms of idiopathic complaint which make their appearance.

This order does not include the exanthemata only, but it comprehends, along with variola, such incongruous complaints as erysipelas, tinea capitis, and the itch.

The other four orders of the phlegmasiæ, are, as we have previously observed, founded on the diversity of texture in the different parts of the body. It is needless to recur to this part of the subject. We have already sufficiently shewn, that it is the tendency of such a plan to associate dissimilar, and to disperse similar diseases; diseases similar or dissimilar, in every other point of view, except that of their being, for the most part, affections of similar textures of the animal frame.

The third class is that of hæmorrhagies, and is nearly the same with the one instituted by Dr Cullen. We cannot but admire the appellation given to the first order of this class, "hæmorrhagies des membranes muqueuses,"—as if it was possible for spontaneous hæmorrhagy to take place from any other structure. Nor were we less surprised at the enumeration of the catamenia, and, still more, of amenorrhæa, in the class of hæmorrhagies.

The fourth class consists of the nevroses. Here we observe little novelty, and have no objections, except those made in a preceding page of this review. We consider the first order, "nevroses des sens," as properly belonging to this class, and accordingly as an improvement on Dr Cullen's arrangement. But the fourth order "nevroses de la digestion," is instituted at the expence of retaining probably the least satisfactory part of the Synopsis Nosologiæ.

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* Vide Willan on Cutaneous Diseases, p. 273.

The fifth and last class is termed "Lesions organiques". The first sous-ordre, of the first order, is the impetigines of Dr Cullen, with little change except in name. The same may be said with regard to the second sous-ordre, of the second order. The other parts of this class do not present any thing remarkable, either for precision in definition, or happiness in method.

These observations lead us to remark, that there is more apparent and nominal, than real novelty in the present system of nosological arrangement. In the classification of the fevers, indeed, there is novelty enough; but let us compare the other classes of the Nosographie with the correspondent classes of other nosologists. In the system of M. Pinel, the *phlegmasies* may be considered as the most characteristic of the author's plan; the orders are, phlegmasies *cutanées*; phl. des *membranes* muqueuses, et sereuses; phl. du systeme cellulaire et des organes parenchymateux; phl. des tissus musculaire, fibreux et sinovial. The orders of this class, instituted by the first nosologist, Sauvages, are phlegmasiæ *exanthematicæ*, *membranaceæ*, *parenchymatosæ*. The hemorrhagies are nearly like the same class by Dr Cullen: there is not much greater difference between the class of *nevroses*, and the neuroses of Cullen. In the *lesions organiques*, the first sous-ordre of the first order is the same as the impetigines of the same author, and there is little or no change in the hydropes. Nor is the idea itself, of forming a nosological arrangement on the principle of anatomical structure novel. Sauvages has a "Methodus Anatomica Morborum," but, unfortunately, Sauvages did not possess the knowledge of the differences in the various membranes and textures of the animal frame, which M. Pinel may have derived from the works of Mr Hunter.

In the last place, we observe, with regret, that many of the most afflicting diseases to which the human frame is exposed, are entirely omitted in the Nosographie Philosophique: whether from the same cause * that occasioned many to be omitted from the synopsis nosologiæ we presume not to determine.

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* Prolegom. Dein sunt alii morbi satis noti quibus, in nostro systemate, locus idoneus nusquam inventus est.

PART III.

MEDICAL INTELLIGENCE.

Report of Diseases treated at the PUBLIC DISPENSARY, *(near Carey-Street,) London, from Nov.* 30*th* 1812, *to Feb.* 28*th* 1813.

ACUTE DISEASES.

	No. of Cases.		No. of Cases.
Febris	5	Peritonitis	1
Febris infantum remit.	9	Variola	3
Hydrocephalus	1	Rubeola	6
Otalgia	1	Scarlatina	1
Cynanche tonsillaris	8	Herpes zoster	1
Catarrhus	112	Erysipelas	4
Pleuritis	2	Arthritis rheumatica	2
Peripneumonia	7	Rheumatismus acutus	7
——— notha	2	Dysenteria	12
Hepatitis	1	Abortus	3

CHRONIC DISEASES.

	No. of Cases.		No. of Cases.
Asthenia	8	Hæmorrhagia intestin.	1
Vertigo	4	Diarrhœa	10
Cephalæa	21	Lumbrici	1
Hemicrania	4	Ascarides	2
Catarrhus chronicus	65	Tænia	1
Asthma et Dyspnœa	6	Marasmus	10
Hæmoptysis	10	Peritonitis chronica	2
Phthisis	23	Physconia	1
Dyspepsia	20	Hæmorrhois	1
Gastrodynia	16	Hysteralgia	4
Pyrosis	2	Menorrhagia	6
Hæmatemesis	1	Amenorrhœa	6
Hepatalgia	3	Dysmenorrhœa	1
Icterus	2	Leucorrhœa	9
Colica	1	Nephralgia	9
Enterodynia	18	Dysuria	2

CHRONIC

Chronic Diseases continued.

	No. of Cases.		No. of Cases.
Enuresis	1	Hysteria	5
Hæmaturia	2	Hemiplegia et paralysis	9
Rheumatismus chron.	26	Scrofula	2
Lumbago	7	Prurigo	1
Sciatica	1	Lepra	2
Pleurodyne	6	Urticaria	1
Hydrops	2	Erythema	3
——— ovarii	1	Intertrigo	1
Hydrothorax	2	Pompholyx benignus	1
Anasarca	7	Eczema	3
Epilepsia	3	Rupia	1
Chorea	2	Aphthæ	4
Aphonia	1	Impetigo	4
Stupor manuum	1	Porrigo	15
Tremores ab hydrargyro	1	Ecthyma	2
Dysphagia	1	Scabies	20

The winter, though not particularly severe on the whole, has been such as to multiply the diseases usually originating from the influence of cold. The greatest intensity of cold prevailed in December; from the 6th to the 20th of which month, a steady frost, with the thermometer from six to ten degrees below the freezing point, continued without intermission. From this time to the end of January, the temperature was generally low, descending below the freezing point during the nights, and accompanied by frequent fogs; at the latter end of the month, the frost again set in, with a fall of snow, but terminated in a few days. The month of February has been milder, but extremely wet and stormy; frequent and heavy gales of wind from the W. and S. W. have prevailed, accompanied by very heavy rains.

The season has, on the whole, been productive of a considerable degree of sickness, which, however, has been chiefly of that kind which is attributable to the impressions of cold and moisture, and has occurred pretty uniformly throughout the winter, the combined fogs and frosts of the former months effecting what the rains and damps of the present have continued to produce, Of the six hundred cases, comprehended in the preceding list, above one third consist of pulmonary disorders, and about one half, including the rheumatic and inflammatory affections, are clearly the result of the causes alluded to.

Very little that is worthy of observation has presented itself to our notice, except the unusual severity of many of the catarrhal affections. The attack was, in several instances, extremely sudden and violent, resembling in some measure the commencement of the epidemic influenza; the patient was struck with great prostration of strength, accompanied by vertigo, headache, and dimness of vision; and the febrile symptoms assumed a degree of violence, which is unusual in the ordinary cases of catarrh. In two or three instances, which occurred in elderly people, subject to annual attacks of pulmonary disease, the symptoms were suddenly aggravated, as if by a rapid obstruction in the bronchial passages; the power of expectoration was nearly lost, and the patients died within twenty-four or thirty hours, worn out by fruitless efforts to unload the bronchial tubes, or by a more rapid and distressing suffocation, accompanied by great restlessness and jactitation, with a confusion of intellect, and a countenance expressive of great terror and alarm. Such cases were already hopeless, when they were visited, after this aggravation of the symptoms called for such attention to the patients, who had previously attended at the dispensary; for nothing but a more speedy sinking of the vital powers could be expected from blood-letting, in these enfeebled habits, when the access of the air to the bronchial cells was prevented by the profuse excretion of mucus, with which they were loaded, and through which respiration was performed with a wheezing and rattling noise; and when the pulse was scarcely perceptible in its feeble but rapid beats, leaving the skin chill and damp from the inefficiency of the cutaneous circulation. Under such a condition of the skin, the counter-irritation and discharge of a blister are not to be obtained, even if this operation could be sufficiently speedy; and the stimulant expectoratents can produce but a feeble excitement on the worn out irritability of the system. It is only at the very onset of such an aggravation of symptoms, that the rapid effusion can be prevented by the active measures just alluded to.

A striking instance of the remedial effects of purgatives in passive hæmorrhagy, as it is called, which, though unaccompanied with petechiæ or vibices, appeared to have a great affinity to purpura, occurred in one of the cases of hæmaturia. Blood was discharged with the urine, without any nephralgic symptoms, and was at the same time expectorated from the lungs, without the usual symptoms of irritation accompanying hæmoptysis; and the patient was a middle aged woman, with little appearance of a phthisical habit, or indeed of much derangement of health. Two active purgatives of calomel and jalap were therefore given to her, to be taken on two mornings, with the interval of one. She returned to the Dispensary on the fourth day, and took leave, affirming that she had had no return of either hæmorhage since the first powder, and was in perfect health.

The case of chorea, connected with local injury occasioned by a blow on the head, which was mentioned in the last Report, as being benefited by the operation of a *seton* in the neck, after the section of the temporal artery, bleeding by leeches, the application of blisters, which were kept open for some days, and the steady repetition of alteratives and active purgatives, had failed to produce any amelioration, gradually terminated in health. I have had several opportunities of witnessing the superior advantages of this mode of local depletion, over every other means, in chronic affections of the head, where organic mischief was apparently going on. A few years ago, a girl, not arrived at the age of puberty, was reduced to a state bordering on idiotism by frequent attacks of epilepsy; there was, in fact, little other prospect than of confirmed idiotism for life, if she survived the severe paroxysms of convulsion. The measures just enumerated, and particularly repeated bleedings by leeches, open blisters, and mercurial laxatives, were carefully employed; but without affording any essential relief. But from the moment when the discharge from a seton in the neck commenced, she began to recover her intellects; the drivelling expression of fatuity gradually left her countenance; and the epilepsy ceased. She is now a servant in a family, in the neighbourhood of the Dispensary, where I have lately had occasion to see her from time to time, and she has remained free from the epilepsy, as well as in possession of a respectable share of mental acuteness. In a case of most intense and unremitting headache, in an adult man, which was accompanied with a constant frequency of pulse, an acute sensibility to light and sound, emaciation, and sickness, the local depletions were employed with considerable assiduity, and with temporary benefit; and a course of mercurial pills, with squills and digitalis, was persisted in for several weeks, which at length produced salivation. But it was only during the latter part of this course, when a *seton* was opened in the nucha, that symptoms of amendment gradually appeared; and ultimately terminated in health. In addition to the convulsive affection, characterizing chorea, which the boy, mentioned in the last Report, suffered, he was disabled from walking or standing for a considerable time, and appeared to be incoherent, and at times vacant and stupid, in consequence of the morbid condition of the encephalon. In all these respects he gradually, though slowly, regained the proper exercise of his functions, while the discharge from the seton continued; and he was still in a progressive state of amendment, in respect to strength and general health, after the seton was closed.

T. B.

Bedford-Row, February 28, 1813.

In the Press, and to be Published in April,

A PRACTICAL SYNOPSIS of CUTANEOUS DISEASES, (according to the arrangement of Dr Willan,) exhibiting a concise view of the diagnostic symptoms, and the method of treatment. By THOMAS BATEMAN, M. D. F. L. S. Physician to the Public Dispensary, and to the Fever Institution, London. In one vol. 8vo.

This work will contain an epitome of the whole of the eight Orders of Cutaneous Diseases, announced by the late Dr Willan, of which four only have been completed and published. Its object is to present a complete outline of the system, and to detail briefly the characteristic appearances and progress of each disease, and the principles of treatment, without omitting altogether the historical and philological inquiries, which may contribute to illustrate the classification.

ERRATUM.

No. 33. p. 15, line 21, *for* approved, *read* improved
p. 18, line 5, *for* This much, *read* Thus much.
14, *after* most, *add* specifically reposed.

Communications have been received from Messrs Scott, Bowman, Christian English, Burrel, and Isbell.

*** Communications may be addressed to the Editors, to the care of Messrs CONSTABLE & Co. Edinburgh; Messrs LONGMAN, HURST, REES, ORME, & BROWN, London; and GILBERT & HODGES, Dublin.

No. XXXV. will be Published on the 1st of July 1813.

THE

EDINBURGH
MEDICAL AND SURGICAL JOURNAL.

1. JULY 1813.

PART I.

ORIGINAL COMMUNICATIONS.

I.

Report on the State of Vaccination in certain districts of India, and in the Isles of France and Bourbon. By WILLIAM SCOT, Surgeon.

THE situation which I held in the Honourable East India Company's service, during the last six years, having afforded me ample experience on the grand scale, of the efficacy of the vaccine inoculation, as a preventive of small pox, and as it is on such experience only that the cause must now rest, (experiments on individual cases having been so varied, and so multiplied, that we can thence derive no further proofs,) I mean, in the following remarks, to state the general result of my observations on this subject, and to communicate the plan which I had formed, and was acting upon, in the year 1811, in order to render vaccination general and effectual in the isles of France and Bourbon, where I was intrusted with the superintendence of this new inoculation.

From January 1806, to September 1810, I was in charge of vaccination throughout a district on the Coromandel coast, extending about 150 miles along-shore, and 50 inland. Four native vaccinators were employed under my orders, and, in that period, there were vaccinated upwards of 40,000 persons, of whose names and various designations I kept a complete register.

I by no means pretend to say, that in such a vast number of inoculations, not one failure occurred. I should have been well pleased, had instances of the kind been brought to my notice. It being my firm belief, that some cases must necessarily have been imperfect, either from constitutional peculiarity, negligence of the practitioner, or inattention of the patient, I would have preferred a faithful report of such cases, to a total silence, which might proceed from an anxiety to keep them from my knowledge. I therefore neglected no measures to procure such information; I invited it from the people, from the public servants of the collector of the revenue, of the judicial authority, and from the vaccinators themselves, whom I taught to rest their faith on the broad basis of general experience, and to apprehend no displeasure on my part, but for negligence. No case of failure, however, was ever reported to me!

The small-pox contagion was never, I believe, totally absent from the Coromandel coast, but its epidemic invasion was regularly once a year, beginning and ending with the hot season; that is, from about April till October. This was formerly a time of universal terror and dismay.

In the month of April 1809, I report to the superintendent-general of vaccination at Madras, that "I have no intelligence of the small-pox being in any part of these districts, to which the native vaccinators attribute the decrease of vaccine inoculations, as, without some such powerful stimulus, the apathy of the native character will defeat the best intentions for their benefit." In that month there were performed only 672 vaccinations, about a third of what, the year before, the dread of small-pox had enabled the vaccinators to perform. Again, in June of the same year, I report, that "the small pox has not appeared this year in these districts, contrary to custom. This exemption from so fatal a scourge, renders the inhabitants less eager for the vaccine, as the returns of this and last year, at the same periods, will testify." In the month of August, of the same year, a battalion of infantry passed through the districts, and infected the families of some washermen with small pox, yet, though this was the usual season for the disease to prevail, it did not spread, nor were any precautions taken to prevent it. In a letter dated the 14th of August, I detailed this unprecedented exemption to the superintendent-general, and though I said, that "it might in some measure be attributed to the effects of general vaccination, there being hardly any adults left unvaccinated;" yet I was then inclined to impute some effect to a peculiarity of season, that year proving rather cool and cloudy, with damp winds. But in 1810, when no such peculiarity of season existed, the same happy exemption obtained; and, in September of that year, I report to the superintendent-general, previous to my proceeding on foreign service, that, "during my superintendence of vaccination in the Nellore and Ongole districts, upwards of forty thousand persons have been vaccinated, and none can now be procured to undergo this process, but such as are of a very tender age; and I have proof of the efficacy of my labours, in the exemption of these districts from the epidemic small-pox, for *two years past*, though infection has been frequently introduced."

With regard to the introduction of the vaccine inoculation into the French islands, I regret that the loss of some papers prevents me from stating it in detail. It was first brought, I believe, from Bombay; and experiments were made upon it by order of the French Government. It was always an object of solicitude with the British in India, to extend the blessings of vaccination as widely as possible, and the French islands, more than once, received fresh supplies of the virus, when, by neglect or mismanagement, it had been lost. When the expedition was preparing at Madras, for the reduction of the Mauritius in 1810, I offered my services to the Government for conveying thither the vaccine disease. They were immediately accepted.—We have thus the singular but gratifying spectacle of a Government taking an active interest in the ulterior welfare of a people, at the very moment when its energies were directed to their conquest and subjugation. The measures I had laid down for a series of successive inoculations on the voyage, were interrupted by various circumstances attendant on the hurry and confusion of embarkation. The virus afterwards disseminated in these islands, under my superintendence, was, therefore, what I found in use, after the capitulation. The French surgeons were completely under the authority of their Government. In the 12th year of the republic, General De Caen constituted a board of seven members, the two first being the executive, for the purpose of examining the diplomas of the practitioners then in the islands, and of granting commissions to such as had none from any European college or university. For this purpose they were subjected to three examinations by the Board, and any one who practised illicitly, was liable to a fine of from five hundred to a thousand francs, to be doubled on a second offence. By the same decree, all surgeons were prohibited from undertaking any operation of magnitude, without the advice and assistance of a physician, under liability to prosecution for damages. Vaccination had been under the general control of this Board, which appeared, ed, however, in this instance, to have made but very limited exertions. No precaution was taken to diffuse the vaccine inoculation in the interior of the islands; no register of the persons inoculated had ever been kept; no plans were devised for inoculating the adult population, nor for the inspection of the disease after inoculation. In short, the only measure of authority I could ever trace, was the Board's exonerating themselves from immediate charge, by nominating each month three surgeons in Port Louis by rotation, who were bound to receive and keep up the virus for that month. Over the surgeons in the interior no control appears to have been exerted.

The principal obstacle to the formation of a proper system of vaccination, appeared to have arisen from that spirit of jealousy which generally exists amongst private practitioners. No one being appointed and paid by Government to conduct vaccination, it was the peculiar province of none, and every practitioner resisted the interference of another, with those families by whom he was employed. In the French islands, almost all the surgeons are paid by what is termed "*abonnement*," that is, a certain sum annually for each slave. Hence it became their interest to guard against small-pox, as well as against any other disease. With the residents in towns, this method of payment does not obtain; but I must do the profession the justice to say, that no class of men could discover more disinterestedness than they did. They were unanimous in their belief of the efficacy of the vaccine, and only waited for the adoption of some plan which might secure to the inhabitants the full blessing of the discovery, without the risk of affecting their own individual rights.

All these difficulties were obviated by the appointment of an English surgeon, as superintendent, who, being in the service of Government, could have no intention of entering into competition for private practice; two French surgeons were at the same time nominated to act under the superintendent, in the pay of Government, one to vaccinate the population of Port Louis, the other that of St Denis, Bourbon, while the particular duty of each was to keep up a stock of virus, by inoculations on infant subjects.

By a proclamation of Government, this institution was announced and explained to the public, its necessity and its vast importance were stated, and the cordial co-operation of every individual was invited and expected, in return for this benevolent act of the Government, which involved much trouble and considerable expence. The medical gentlemen were assured, that no encroachment on their rights and interests was to be dreaded, Government having in view only their relief from a burden they had hitherto most meritoriously borne; and finally, the civil authorities of the two islands, were ordered to pay the strictest attention to all the requisitions of the superintendent, and to render him every assistance in their power. The medical profession were placed under his orders, in so far as regarded vaccination.

The object of the vaccine institution naturally divided itself into two branches, first, the immediate vaccination of the adult population; and, secondly, the successive vaccination of the children, as they were born. The first object was of peculiar importance. Contagious diseases are particularly formidable to insular countries, because their invasion being generally at distant periods, a great mass of subjects accumulates, who are susceptible of infection.

The Isle of France is divided into nine quarters or districts, Bourbon into eight. In each of these quarters is a *Commissaire civil*, his deputy and secretary. This officer is a magistrate, a collector of revenue, a justice of the peace, and, in short, is armed with authority in almost every shape. In his office, he keeps a register of every person whatever resident in his district, distinguishing their colour, sex, age, &c. also a register of births, deaths, and marriages.

My first care was to have authentic copies of these documents, and to secure to the office of the superintendent of vaccination, a regular quarterly return of the births throughout the two islands. In this return, every designation necessary for identifying the persons was ordered to be inserted.

It is unnecessary here to dwell on the ordinary motives for keeping correct registers of vaccinations. In the French islands, I had new objects in view. In the appendix will be found the form of register I adopted, together with an abstract, both of which were printed at the public expense, and blank copies furnished to the surgeons as they wanted them. It will be evident, that a comparison of the surgeon's register with the commissary's return of births, furnished me at once with a correct view of the state of vaccination, and placed at my disposal all the infant subjects, for preserving the virus in the islands.

These are the leading features of the plan I laid down, for rendering vaccination general and effectual in the French Islands; and for several months I contented myself with waiting the result of the government address to the public, and of the circular letters of instructions issued by me to the civil commissaries and surgeons.

During this time, however, I traversed the two islands in all directions, conversing with every person from whom I could gain information, and I neglected no opportunity of seeing the commissaries and surgeons, and explaining their duties to them *viva voce.* I soon found that it would be necessary to force the people to pay attention to their own interests; for though it was evident to their reason, that the measures recommended were necessary and salutary, their idleness, their levity, and their indifference, but ill seconded my best exertions.

The Isle of France contains about 6000 whites, 7000 free blacks and people of colour, and from 60,000 to 70,000 slaves. In the latter class, there are 13 males to 6 females. The isle of Bourbon has probably fewer whites, but is reckoned to contain many more slaves. The small-pox has generally appeared in both islands at the same periods, excepting in 1811, when it was confined to the Mauritius. In the year 1756, the small-pox first appeared as an epidemic at the Mauritius, and was extremely fatal; the contagion was kept up for a year, and it is computed, that two died of every five who were attacked by it. In 1771, it appeared a second time, and was no less formidable, so that the island was almost depopulated.

In 1792, when the population had greatly increased, a third epidemic appeared, which, at the lowest computation I have seen, destroyed more than 20,000 people. None of the inhabitants can speak of it now without horror; and the year after, a law was enacted, condemning the captain or surgeons of any vessel to death, who should make a false declaration of the state of health of his crew, in respect to the small-pox. In August 1803, the Ulysses, a slave-ship from Mozambique, arrived at the Mauritius, having the small-pox amongst the slaves. She was sent back to the Seychelles, and the vaccine virus having by that time been carried from India to the island, the people were roused by a recollection of former calamities, and after a few preliminary experiments, immense numbers were vaccinated, but with very little care or attention. Perhaps not one case in a hundred was examined during the progress of the disease. I make this estimate from knowing that no note was kept by any surgeon of his inoculations, and from the difficulty, or oftener the impossibility of seeing our patients, when our utmost efforts were bent on keeping a perfect register.

In July 1811 some cases of small-pox were brought from Madagascar, on board the captured French frigates, and the contagion was established on shore; yet, from that period till the end of November, at which time I left the island, between 40 and 50 cases only had occurred; and I have lately been assured that the contagion has long since entirely ceased. On the 15th November, I report to the superintending surgeon on the island, that " we have a melancholy proof of the carelessness with which vaccination has been hitherto practised, in the numbers ttacked by small-pox; of about 50 cases of that disease, seven ave been believed to be vaccinated."

Two months before the introduction of the small-pox, I found t necessary to warn the inhabitants, that, from every information I could gain of the previous practice, I had no doubt that great numbers who were supposed to be duly vaccinated, were still in reality exposed to variolous infection. I gave them a distinct ccount of the ordinary progress of the disease, and urged every person to have their children and slaves reinoculated, in all cases where the course of the vaccine had not been attentively examined. Great numbers were accordingly subjected to this precautionary measure of a second inoculation; but I regret that the documents I have by me do not enable me to state the result with precision, and, on this subject, I wish to avoid any assertion founded merely on memory.

The exertions of the French surgeons were but little seconded by the people, who were most interested in their success. It is almost incredible, that a people, styling themselves polished and civilized, should evince such apathy, not only where the lives of their children, but their pecuniary interests in their slaves were concerned. In a report of the 20th August 1811, to the superintending surgeon, I mention this indifference of the people, even after the small-pox contagion had been introduced. "Instead of punctually assembling the subjects for inoculation, at a convenient time and place for the surgeon, he has often the task of searching the habitations himself, and of coming at various times to catch the opportunity of finding them unemployed. The inoculation once performed, they pay no attention to the necessity of frequent inspection during the progress of the disease; they content themselves with thinking, when they think at all, that if the pustule has been genuine, it will leave a mark upon the arm; a most fallacious mode of judging, since other kinds of matter inoculated may do the same, independent of the frequency of marks made by tatooing.

"The practice appears to have been so slovenly, that were a thousand cases to occur of small-pox after alleged vaccination, my faith in its efficacy would not be shaken."

Yet, under all these disadvantageous circumstances, the astonishing contrast already stated, between the progress of the contagion of small-pox in 1792 and 1811, at the Isle of France, must carry conviction to the most sceptical mind.

The inhabitants venerate the name of Jenner, and, associating it with the gloomy recollections of 1792, lament that his labours had not been consummated at a more early period.

The state of the skin in blacks, and especially in the negroes, renders the vaccine a very dubious disease, and it is much more difficult to ascertain the regular progress of the affection in them than in Europeans; it therefore requires the most careful and frequent inspection.

There is a dry, mealy, insensible state of the skin amongst them, where it is often impossible to produce the disease; in others, it advances for five or six days with regularity, and then fades, as if from insensibility of the skin; at other times, the pustule advances, but goes through the stages in miniature as it were. Again, a pustule, that to all appearance is perfectly regular, even so late as the 8th or 9th day, suddenly becomes more elevated, and is filled with a bloody matter, though previously limpid, and though the centre still continues depressed; after this vitiation, neither the areola nor scab are perfect. Reinoculation to a fourth or fifth time will at length perhaps produce the genuine pustule, but it much more generally fails. These adverse circumstances doubtless arise from some peculiarity in the subject, and therefore will continue to occur; but, if time brings no remedy, it will at least reconcile us to such things, and teach us to impute failures to other causes, than the inefficacy of vaccination.

Of the utility of Mr Bryce's test, by a second inoculation on the fifth day, I am so persuaded, that I had a column in the register, expressly to note the cases subjected to it; and, in all my addresses to the public, I constantly held forth its vast importance. I advised it in all cases as a matter of choice to the patients, while I ordered it in all convenient cases as a point of duty with the surgeons.

Mr Bryce's directions for the employment of the dry crust to propagate the vaccine infection, I applied to practice, perhaps more extensively than most other practitioners. Having found it nearly or fully as successful as the recent virus, I resorted to it, on account of its great conveniency. I shall record one instance sufficiently conclusive on this head. During the existence of small-pox at the Isle of France, in September 1811, some slave ships were seized at Port Louis, by one of our frigates. The slaves were landed, to the number of 359, and put into one large building; 39 of them had evidently had the small-pox. As no time was to be lost in a case of such urgent danger, I immediately inoculated 320 of them, with the matter of crust dissolved in water, there not being sufficient recent virus to be had for this purpose. I had previously taken measures to have always at hand a large supply of these crusts, to send to distant quarters, or to meet any emergency. Of these 320 inoculations, 174 took effect, and only 53 of the 146 failures, took the disease on a second inoculation, which was still performed principally, though not entirely with the matter of crust. The other failures were tried again and again with recent virus; 84 resisted every attempt, and 9 were sent to hospital, of whom I cannot at this time give any account.

In short, I regard this as a most important improvement in vaccine inoculation, especially in hot climates, where the preservation of the virus is effected with great difficulty. By the word "failure," I mean that no pustule followed inoculation. In the first quarter of 1811, only one provincial surgeon made any return to me of his operations, which, with those of the Institutions established at Port Louis and St Denis, amounted to 169. In the 2d quarter, there were vaccinated in all 1326: another provincial surgeon made a return in that quarter. In the 3d quarter, however, *nineteen* provincial surgeons made regular returns, and the numbers vaccinated ammounted to 2854, making a total, for nine months, of 4349. Considerable numbers were vaccinated in the months of October and November; but I cannot now state their amount. During the first alarm of small-pox, I was most unfortunately at Bourbon, and having it in contemplation to confine the business of vaccinating in the town of Port-Louis solely to the Institution, I had not furnished the surgeons of that town with registers; in consequence, none were kept, and great numbers of people were inoculated in the usual careless manner.

I had succeeded in establishing a correspondence with all the civil authorities of the Mauritius, and had addressed those of Bourbon. I had also correspondence with most of the surgeons, but the want of a regular post was severely felt. Difficulties, however, were gradually yielding, and I had hopes that patience, and a moderate exertion of authority, would ere long have perfected all my arrangements. It would be an unnecessary and an ungrateful task to record all the difficulties I met with, from the carelessness of some, the obstinacy of others, and the indifference of almost all.

The government was ever ready to second my views, and various addresses were issued to the public. I found more effect however, from circular letters addressed to the surgeons themselves, at least those in the provinces; for their interests were nearly concerned in preventing the small-pox, and they were sensible, that some regularity of plan, such as I proposed, would greatly lighten their labours. I found it expedient to prohibit the surgeons of Port Louis and St Denis from vaccinating at all; for they were perpetually interfering with my arrangements of the infant-subjects, so that we were several times without a sufficient number for keeping up the virus; and the institutions at each of those capitals were fully equal to the task.

I was preparing to submit the result of my observations to the local government, when I was ordered to England in charge of one of his majesty's frigates. I had communicated the substance of them in conversation to some of the principal functionaries, and had reason to believe that my suggestions would have been adopted, though, perhaps with some modifications. Indeed, in a government proclamation, dated the 6th of September, this was partially announced; it run as follows: "As a temporary measure, and in anticipation of other arrangements, rendered necessary by the extreme negligence of the inhabitants, His Excellency the Governor is pleased to order, that every surgeon who may have occasion to vaccinate, shall exact a deposit of one Spanish dollar for each person inoculated; this money will be restored at the end of fifteen days, provided the patient has been brought for examination four times, but it shall be forfeited to the surgeon in every case of neglect."

About this time, I first became possessed of the 2d edition of Mr Bryce's valuable work on vaccination, from which I took the idea of the deposit.

One of the chief branches of revenue in the French islands, arises from a capitation-tax on slaves. Hence it was the constant aim of the inhabitants to conceal their numbers; and considering that they derived no advantage from children for many years, very few births among the slaves were ever declared. Thus, for a population of 4,300 whites, the births returned for six months, amount to 49.—free blacks and people of colour 4170, the births 103,—while for 49,000 slaves only 62 births were declared in the same period. It is true, as I have already stated, that the males are to the females as 13 to 6, in this unhappy class of beings, but still it is evident that the concealments must be enormous. These numbers refer to the eight districts of the Mauritius; I have no return by me of the populous town of Port Louis. The penalty of concealment was very considerable, but hardly an instance of conviction or levy had ever occurred. Yet this concealment went to an alarming extent; in one district with 6656 slaves, 17 births are declared, in another with 6693, only 3 births, the proportions of male and female the same in both. In cases of succession to property, when a false return involves forfeiture of the whole estate, it has often been found that one-third of the slaves had never been declared or paid for. The French government had never been able to check this practice. Some schemes I believe were in agitation with the British government to the same end, but I left the island before their promulgation.

To remedy this and other evils, I suggested that children under 5 or 7 years of age should be exempted from the tax, thus taking away the great inducement to conceal their births. That false declarations should forfeit the slave to government. That no obstacle should be presented to the introduction of the small-pox into the islands. That if any person being a free man, or any of his children, were attacked with small-pox, a fine should be levied of from 50 to 500 dollars, according to circumstances. That if any slave were attacked with small-pox, he should be emancipated in event of survival, and a fine of 500 dollars imposed on the proprietor in the event of his death. But in case it could be proved, that such instances of small-pox occurred in people registered by any surgeon as duly vaccinated, such surgeon should be liable to the consequences. To lighten this responsibility, the deposit money should be increased if necessary, and no vaccination be deemed perfect, unless submitted to four examinations; the neglect of one examination to forfeit the deposit, and the responsibility to rest with the person inoculated. I suggested farther, that surgeons should not be allowed to refuse vaccinating in cases of *abonnement;* in others they should be paid for it at a certain rate; or the people might have recourse to the institutions at Port Louis and at St Denis.

In the event of these arrangements being adopted, an epoch not very distant would have been fixed for their commencement; and, while the penalties held out would have secured the immediate vaccination of all the adult subjects, the returns of births, and the registers would have been perfected, and effectually provided for the vaccination of the infant generation. This is an object never to be lost sight of to the most remote times, and it requires no great share of gloomy foresight to predict, that after a lapse of many years, when the vaccine shall have banished the small-pox, and perhaps extinguished the recollection of its horrors, many will neglect the shield which has protected them, and again become exposed to the most dreadful ravages.

I am fully sensible, that a plan of this arbitrary nature would not be practicable in England to its full extent; but it was perfectly compatible with the laws and government of the French islands before and after their capture, and may perhaps apply to many of our other colonies.

I may perhaps be accused of arrogance, in assuming as original, and in dignifying with the name of plan or system, what I have communicated; and I am more exposed to the remark, that the plan after all was not completely put in force, and of consequence its success remains unascertained. But I think its practicability is apparent, and its simplicity such as certainly to produce the end in view.

Edinburgh, March 1, 1813.

Registre de chaque mois, et Rapport des Inoculations de Vaccine, executées par Monsieur A. B. au Quartier de pour le Mois de 1811.

Nombre.	Noms des personnes inoculées.	Couleur.			Sexe.		Age.		Jour de l'inoculation.	Resultat de l'inoculation.	Inoculations la 2de fois, le 5me jour.	Noms des parents, maitres, et le lieu de leur residence.	Examinations.				Observations.
		Blancs.	Mulatres.	Noirs.	Males.	Femelles.	Années.	Mois.					1re,	2de,	3me,	4me,	

Note.—The column of examinations was added in writing to the printed registers, after the order for the deposit of money. The result was noted as " *Good,*" " Doubtful," " Failed," " Spurious," and, when necessary, the *number* of the person was again inserted, with an observation on his case. The result of Mr Bryce's test was noted as " Succeeded," " Failed." The examinations were marked with the initial letters of " Good," " Doubtful," " Bad," " Failed." The observations were to note all cases requiring a second inoculation.

Extrait des Inoculations faites dans le mois de *par Monsieur*
au Quartier de

Par qui vacciné.	Couleur, et sexe de ceux qui ont été duement vaccinés.								Observations.
	Blancs.		Mulatres.		Noirs.		Total.		
	Males.	Femelles.	Males.	Femelles.	Males.	Femelles.	Males.	Femelles.	— inoculations manquées. — revaccinés avec succès. — revaccinés sans succès. — soumis à l'epreuve de Bryce.

II.

Case of Periodical Day-Blindness. By John Isbell, Member of the Royal College of Surgeons in London.

Mr ——— applied to me on the 3d of November 1812. He had, for the last two months, been under the care of a surgeon, but had not received any benefit under his treatment. He complained of pains in his limbs, with occasional loss of voluntary motion and sensation in the left arm and leg; the pains being most severe during the night, and felt more particularly in the central parts of the bones. The joints were also affected, but in a much less degree. Daily, between the hours of eleven and two, a total loss of sight came on, preceded by a severe pain of the forehead, but seated principally over the orbits. The attack was generally of half or quarter of an hour's duration, sometimes returning three or four times within the said hours. He was, besides, now and then deprived of speech, but which seldom continued more than a minute or two. His hearing always remained perfect. His body was much emaciated, which had been gradually increasing for the last three years. The last twelvemonth he had past in great misery, and despaired of obtaining any permanent alleviation of his sufferings. The history he gave of his complaints was as follows:

About four years ago he had twice contracted the venereal disease, in the form of chancres, for which he had some medicines from a druggist, with the effect of removing them. Twelve months afterwards, he felt slight pains in his limbs, and, about once in a fortnight, a dimness of sight supervened about midday, attended with pain of the forehead and eyebrows. In twelve months, these symptoms had gradually increased, and a *blindness* came on every week or ten days, observing the same hours and duration, but still increasing. Since that period, the disease had returned daily, bearing the form described on his application to me.

From the nocturnal pains, and a peculiar appearance of countenance, I suspected his complaints to be connected with a venereal taint, but was desirous of having further evidence, previous to adopting a mercurial course. On examining his extremities, I discovered, on the lower end of the radius of the left arm, an enlargement, resembling a venereal node, which, by night, was extremely painful, but the swelling had escaped his observation.

I directed a drachm of strong mercurial ointment to be rubbed in on the thighs at night. The next day, he said his gums were sore, (though I could not dicover any mercurial effect on them), and the blindness did not return; his pains were diminished. The following day his gums were slightly affected, and he was entirely free from pain or blindness. He persevered in the mercurial treatment, (the action of which was kept up during seven weeks), and he has not since, under it, been visited by blindness, or any other bad symptom. His powers of motion, speech, and sight, are entirely perfect, but he still continues much emaciated.

From the circumstance of the blindness not returning after the first friction, I had not an opportunity of examining his eyes during a paroxysm, but his wife informed me, she had never discovered any peculiar appearance of them, and that the attacks were never influenced by any particular circumstances.

Stonehouse, February 14, 1813.

III.

III.

On Oil of Turpentine, &c. in Epilepsy. By EDWARD PERCIVAL, M. B. Dublin.

To the Editor of the Edinburgh Medical and Surgical Journal.

SIR,—I beg leave to communicate to your valuable Journal, three cases of epilepsy, exhibiting the remedial effects of oil of turpentine in that singularly untractable disorder. Perhaps some of your ingenious correspondents may already have made trial of the same medicine internally, or may be able to refer me to some published account of its efficacy in epilepsy. My own search for information on this subject, which has in truth been less diligent than I could have wished, has hitherto been fruitless; and I am consequently ignorant whether my experiments have been anticipated by any preceding medical writer.

I should hesitate on the propriety of promulgating a method of remedial treatment whose success has been by no means complete, were it not that a certain degree of relief has been obtained by it, in a very formidable malady, and a ray of light afforded which other practitioners may extend and improve to more perfect success. The cases of epilepsy in which I have employed the oil of turpentine internally, occurred to my professional care in the Hospital for Incurables near the city of Dublin. The subjects are females, and the disease was of great severity and some duration in each of them.

ELIZABETH WALL, aged 20, of light complexion, inclining to florid, short neck, and full habit, has been subject to severe paroxysms of epilepsy for the space of four years. The first occurrence of the malady succeeded a violent blow by a battledore on the crown of her head. The epileptic paroxysms have rapidly increased in frequency and severity. At the time of her admission to the Hospital for Incurables, in March 1812, the fits usually occurred twice or thrice daily. The most protracted paroxysm, or rather unremitting succession of paroxysms, came on in the afternoon, and held the patient in alternate convulsions and fixed spasms of the lower extremities, the abdominal muscles and the fauces, for the space of four, five, and even eight hours. During a portion of this time the patient appeared to be perfectly insensible, but for the most part she exhibited signs of acute suffering. On emerging from these severe fits, she experienced for one or two hours great lassitude, and frequently fainted. During the course of her disorder, however, she did not suffer any loss of flesh; and her appetite was by no means deficient, though her digestion was weak. Her bowels were habitually costive, and the catamenia had been occasionally irregular.

The first remedies that I employed for her relief were, active purgatives, with calomel or the blue pill until her mouth was slightly affected; then opium in full doses, preserving at the same time a free passage through her bowels. Afterwards I employed valerian, camphor, æther, and other remedies of the stimulating antispasmodic class; all of which were perfectly inefficacious. Blisters applied to the back and abdomen were attended with temporary benefit. The fits of epilepsy still continued frequent, severe, and protracted.

On the 18th of April, I directed two drachms of oil of turpentine to be diffused, in the way of emulsion, by syrup, in a pint of mint-water, an ounce of which was prescribed to be taken every four hours. On visiting my patient two days afterwards, I was agreeably surprised at learning that she had experienced no return of her convulsions after the first dose of her medicine. Neither I nor any of her attendants had prepared her to expect extraordinary efficacy from the draught, which she conceived to be peppermint water, and described to operate as a grateful cordial to her stomach. On the second day the catamenia appeared, which had been previously suspended for six or seven weeks. She continued the use of the medicine for the space of a fortnight, during which period her digestive organs were restored to a healthy tone, her animal spirits and her looks were greatly improved, and her mental faculties, which had been obtused and bewildered by the late severity of her disorder, recovered their natural energy.

From the date above mentioned, to the latter end of October, my patient continued free from any attack of convulsion or insensibility. But she had occasional cramps in the muscles of her abdomen, and wandering pains of the stomach and bowels. These ailments were relieved by frequent purgatives, and warm fomentations. The catamenia continued regular and satisfactory.

On the 4th of November I was informed that, during the preceding week, Wall had experienced three slight attacks of her former convulsions; I therefore directed for her half an ounce of oil of turpentine, to be diffused by syrup in a pint of mint-water, of which she took an ounce every four hours. The effects of this remedy were at first as decisive as before; but having neglected the state of her bowels, she complained to me, on the 14th of November, of headache and lassitude, which were succeeded by two mild epileptic fits on the same day. A few grains of calomel and cathartic extract removed a large load of feces, and the attendant symptoms of pain and restlessness. She continued the terebinthinate mixture for ten days longer, and, until the 11th of December, experienced no return of the epileptic paroxysm. A slight fit on that day induced me to renew the turpentine draught, and to increase its dose. An emulsion was directed, with an ounce of the ol. terebinth. in a pint of mint-water, of which two table spoonfuls, as before, were prescribed every four hours. From that period to the present, (February 1812), she has continued free from any acute attack of epilepsy, being occasionally, however, subject to cramp or spasm of her abdomen. At these times she commonly reclines upon her bed, and, if seized suddenly, will even fall, but never loses her recollection or sensibility. Her appetite, digestion, and sleep are natural, her strength and spirits good, and her intellect perfect.

Jane Reid, aged 30, of low stature, plethoric habit, short neck, and florid countenance, has been subject to epileptic attacks of considerable severity, for the space of 14 years. They were at first excited by the alarm of seeing a man fall suddenly into convulsions, in one of the streets of Dublin. Her fits of epilepsy occur very irregularly, sometimes twice or thrice daily, at other times only twice in the week; these attacks usually subsist for about ten minutes, and the convulsion, though not very considerable, is always attended with perfect insensibility. Her bowels are remarkably torpid, her tongue generally foul, her face flushed, and she complains much of headache. The catamenia are tolerably regular and satisfactory. During the last eighteen or twenty months, her intellect has been much disturbed, and she is subject to alternate fits of dulness and frenzy. Active purgatives have relieved every pressing symptom, excepting the original disorder. With Reid, as with Wall, I made trial of all the usual antispasmodic and antiepileptic remedies, without the slightest benefit. On the 18th of April, I directed for her an emulsion with three drachms of oil of turpentine, half an ounce of syrup, and a pint of mint water, an ounce of which she was desired to take every four hours. Her epileptic fits immediately ceased; she continued the medicine for a fortnight; when her intellect was perfectly restored, her spirits revived, and her looks greatly amended. The gratitude and astonishment which this poor woman manifested on receiving so great benefit to her health, were expressed in the most lively manner, with tears of joy. I may add, hat in this, as in the preceding case, no expectations were held out of any sudden or extraordinary amendment.

About the 20th of October, Reid desired to have her terebinthinate mixture renewed, as she informed me, that for several weeks she had been troubled with uneasiness, and threatenings of a return of her malady, whilst in bed, although she had had no distinct paroxysm since the 18th of April. The medicine was accordingly renewed; on which the catamenia appeared after a postponement of ten days or a fortnight beyond the proper period.

On the 14th of November, Reid had three fits of epilepsy in the course of 24 hours. On inquiry, I found that her bowels had been neglected, and were highly loaded and constipated. This accumulation being removed, she returned again to the turpentine emulsion, in the dose of one drachm of ol. terebinth. taken every four hours. From that period she continued entirely free from her epileptic fits until the beginning of December, when they began to recur every six or eight days, but in a much slighter degree than formerly. Her faculties became gradually much disturbed, and she was alternately dull and frantic, without any luminous intervals. On the 28th of December, and for some preceding days, she was confined by a strait-waistcoat, being perfectly maniacal.

Deeming the present a favourable opportunity for making trial of a large dose of fox-glove, which had been frequently represented to me as a radical cure for epilepsy, I directed (in concurrence with my friend and colleague Dr Litton) that a decoction should be made of two drachms of the dried leaves of digitalis in six ounces of water, one half of which was given without delay, and the remaining half two hours afterwards. No sensible effect of any kind followed the exhibition of this medicine. The patient continued maniacal, had a natural evacuation of feces and urine, and shewed no signs of nausea, languor, or enfeebled circulation. A few days afterwards, the same quantity of the dried leaves of digitalis was infused in the like proportion of water, and when cold was administered as before. It produced no apparent effect whatever. On the following day, and repeatedly afterwards, she had returns of the epileptic paroxysm, but improved gradually in the natural circumstances of bodily and intellectual health.

On the 31st of January 1813, it was reported to me that, for several preceding days, she had severe epileptic fits, and was frequently maniacal during the intervals. At the time of my visit to the hospital she was calm and collected, her pulse was natural, her countenance somewhat anxious and variable; but her evacuations by stool had been copious, and her sleep was observed to have been sound and uninterrupted. Being solicitous to give the fullest trial of the efficacy of digitalis in so hopeless a case, I directed three drachms of the dried leaves to be decocted in six ounces of water, and to be given, the one half immediately, and the other after a lapse of two hours. Both of the draughts were duly administered, when, some time afterwards, nausea, vomiting, sweating, and at length purging, were induced to a considerable extent, and for several hours. On the following day she had two regular fits of her accustomed epilepsy, which have since recurred as frequently as they were accustomed to happen before the exhibition of the oil of turpentine.

MARGARET HARRISON, æt. 25, of middle stature, and plethoric habit, became subject to epilepsy eight years ago, from a sudden alarm. The paroxysms of her disorder occurred chiefly at night, when she had usually two or three mild fits, each enduring about a quarter of an hour. She was admitted to the Hospital for Incurables in the summer of 1812. During the four preceding years she had experienced no menstrual discharge. Her general health and strength have appeared good, her appetite rather voracious, but her intellect has been obtused, approaching to fatuity. July 15, 1812.—I directed for her pills of myrrh, steel and aloes, which, in the course of a few days, induced a return of the catamenia. Her understanding consequently improved, her conduct became more regular and amenable, yet her epileptic fits recurred without any mitigation. She commenced the terebinthinate mixture on the 4th of November, in the proportion of three drachms of ol. terebinth. to a pint of mint-water, which had an immediate effect in abating the frequency and duration of her fits. She became more lively, and for the first time replied to a query of mine, by saying that the medicine had done her great service.

Until the 4th of December her fits of epilepsy had nearly disappeared, when, without any manifest cause, they began to recur in a mitigated and less frequent degree than formerly. I directed for her a mixture, with one ounce of oil of turpentine in a pint of mint-water, of which she took two table spoonfuls every fourth hour, with immediate and decided benefit. On the 29th of the same month it was reported to me that she had relapsed to her former epileptic habits; though her fits were somewhat less frequent, and certainly more gentle than before the use of the terebinthinate mixture.

On the 31st of January 1813, I directed a decoction of two drachms of the dried leaves of foxglove to be administered in divided doses, with as little interval as possible. The effect of this medicine was, extreme nausea, vomiting, and subsequently purging, which continued for the space of eight or ten hours.

The fits of epilepsy however began shortly to recur as before, with less violence than previous to the use of turpentine, but apparently unmitigated by the administration of digitalis. Her fatuity continued without interval or abatement.

It is is essential to remark of the three foregoing cases, that the free use of the turpentine, even to the amount of several drachms taken in the course of the day, produced no distressing symptom, either of the urinary organs or of the stomach or bowels; on the contrary, it proved a grateful cordial, strengthening the powers of digestion, and gently promoting intestinal and renal action. I had no reason to suspect the presence of worms in either of the cases; nor was it discovered that any were voided during the use of the oil of turpentine. The only specific action of that drug was apparently emmenagogue; a hint not undeserving of application to other cases.

I purpose hereafter to give a more full and extended trial of the efficacy of this remedy in epilepsies of various kinds; and may therefore again trespass on your indulgence, by further communications on this interesting subject.—In the meantime, I remain, &c.

IV.

Case of Injury to the Fœtus, without the Mother being affected. By Mr William English, Surgeon, London.

From the many instances on record, it is sufficiently notorious that the fœtus undergoes such complaints in utero, as after birth they are all liable to, without the parent participating therein; but that the fœtus can be personally, as well as constitutionally injured in utero, without the mother being very seriously hurt, is not so readily to be admitted. Yet, by the coincidents of the following case, it would appear, that the latter fact is almost as fully made out as the former; and, if you think it a question of sufficient importance, to entitle it to a place in your valuable publication, I should like to ask the pathologists, or physiologists, who often kindly favour us with their instructing remarks, whether the circumstance is to be attributed to mere chance, every way independent of the fall, or not?

A lady in my neighbourhood, a month before being delivered of her second child, was standing upon a pair of steps, reaching something off the top of a chest of drawers, when she slipped and fell backwards. In her fall, her back, about the middle of the sacrum, came in contact with the key of the room door, which was in the lock, and broke the key in two. She lay for some time insensible, but, when she recovered, was surprised to find that she had power to get up, and fright seemed to be the only suffering she had to complain of from so very serious an accident, excepting a slight soreness and stiffness of the whole back and neck, which continued until, and for a few days after, the child was born.

There was nothing untoward happened during labour, which was of the class called lingering; but the child being large, may account for that circumstance. Soon after birth, a considerable cavity was observed in the child's back, situated about the middle of the sacrum. There had evidently been an extensive abscess, which was barely cicatrized at the bottom, and the skin and cellular substance was thickened and puckered all round the outer edge. For five or six days after the infant was born, there was a slight oozing of thin gummy matter from the sore, caused, I believe, by the friction of the clothes, but it soon healed firmly, and the child continues well. I had some fears that this case would end in spina bifida; however, the injury happily extended no further.—I remain, &c.

Great Tower Street, London, Feb. 17, 1813.

V.

On the Good Effects of Cold Applications to Ulcers. By Mr P. JOHNSON, Surgeon, Royal Navy.

GENTLEMEN,—Having seen much of the good effects of cold applications to most kind of ulcers, during my service as an assistant-surgeon in a large ship; and having often observed no good effects to have arisen from a general use of ointments to sores, from which there existed any discharge of ill-conditioned pus, and that partook of the ulcerated action, as soon as I was favoured with an opportunity to follow the practice of my worthy surgeon, I lost no time whenever I could make use of the cold applications, to put them in practice; and notwithstanding the high terms in which Dr Cassils has spoken of the sulphate of zinc, in the following case of scrofulous ulcers, I had recourse to cold sea-water in preference to his solution.

On having joined my ship, about five weeks since, I found one of her company with five deep and high-edged ulcers, situated between two and seven inches above the patella, which affected him for *many* months; some of them healing, while others were suppurating. My predecessor had used every means that he could devise for their cure, with very little good effect. The man had no constitutional appearances of scrofula, though these ulcers most strongly appeared to partake of that disease. The discharge was ill-conditioned; the ulcers communicated often with each other, as easily ascertained on pressure, or by the probe. Having seen no written document of my predecessor's treatment, I immediately began with poultices of oatmeal, moistened with salt water, to be changed whenever they became dry, with a little lint underneath. From the 21st January, I used the salt water, by applying a cloth and bandage continually kept wet, the water being every hour changed for more drawn up along-side, up to this day, a period of 29 days, when the ulcers are healed, and the man capable of doing his duty. I have made use of no dressing between the cloth and sores. The cloths were rinsed three or four times a-day, consequently very clean.

I must observe, that the surface for the absorption of the saline particles of the sea water was considerable; being the posterior and lateral parts of the thigh, for the length of eleven inches, as well as where the disease was situated. During these 29 days, he slept with his knee uncovered by the bed-clothes, and most of his thigh too, so that the wet was nearly continual in this time. During my service at sea, I have seen many cases of the sloughing and contagious ulcers which were often cured, and always relieved, by a slight pledget of tow, and only one roll of bandage, loose or tight, as the irritable state of the limb or sore would allow, always wetted with cold water, sometimes fresh, often salt. The acrid and corrosive discharge was by this means washed away, the water being poured on the ulcer, so that there was almost a continual dripping from the dressings. On their removal, the sores looked clean, and when compared with those to which cinchona, chalk, poultices, ointments, &c. were applied, the difference in healthy and clean appearance was great indeed.

Cove of Cork, 18*th February* 1813.
(His Majesty's ship Melpomene.)

VI.

VI.

On the External Application of Belladonna to the Eye, for the purpose of Dilating the Pupil. By Mr Thomas Paget, Surgeon, Leicester.

Permit me, gentlemen, in justice to Mr Wishart, to correct an error in his ingenious paper in your last number, on the External Application of Belladonna and other Narcotics to the Eye, for the purpose of dilating the Pupil. Mr W. there states, that "the singular property possessed by these narcotics has been long known on the continent, and in this country was first used in the operation for cataract, by the late Mr Saunders." The first proposition I readily subscribe to, but have reason to believe the latter erroneous In proof of this, I beg to refer to the Medical and Physical Journal for October 1801, Vol. VI. page 352, where it will appear that I had at that time used the extract of belladonna in three cases of extraction of the cataract. This was two years previous to the commencement of Mr Saunders's short but honourable professional career, who is said by Dr Farre, in his concise account of his life, to have established himself as a surgeon in Ely Place, in 1803. Allow me to add, that I have ever since been in the habit of using the extract of belladonna, both at the Infirmary, and in private practice, with little variation in the manner or strength of the application. In the paper above referred to, I expressed an apprehension of danger of evacuating the vitreous humour from too great a dilatation of the pupil; and in this sentiment Mr Wishart, as well as Professor Himly, appear to have united with me; but, though I do not deny that cases have occurred in which portions of the vitreous humour have escaped during the operation, yet I do not think the proportion of such accidents has been greater since, than before I used it; for it must be observed, that, on puncturing the cornea, the iris returns *in part* to its natural state, so that the vitreous humour is not entirely without support; and I very well remember, that, in the only instance in which accidentally the application of the extract was omitted, a part of the vitreous humour escaped. With respect to danger of wounding the iris, it appears to me that the substance of it is so exceedingly thin, that, even in its contracted state, it presents no obstacle to the free use of the knife in making the section of the cornea; and certainly, in puncturing the capsule, there is much less danger of the needle being entangled in the iris in its contracted, than in its dilated state. I have also experienced the greatest advantage from it in performing Mr Saunders's operation on the congenital cataract, and in Mr Gibson's, of extracting a portion of opake capsule which remained unabsorbed after a previous operation, by a hook, through a small incision in the cornea.

Whilst on the subject of cataract, I will take the liberty of mentioning an accident which occurred to me a short time since, and to which I do not recollect a case exactly similar. After extracting the cataract from the right eye of Miss P., a lady of this town, without observing any thing peculiar, except an unusual toughness of the cornea, I proceeded to the left, and made the incision of the cornea, as I supposed, in the usual manner, but on withdrawing the knife through the inferior edge of the cornea, not a drop of aqueous humour followed, and the eye preserved its convexity as before the section was made. On lifting up the flap, I was surprised to find that the knife had passed between the laminæ of the cornea, and that the inner one was still entire. The incision was then repeated through the internal portion, and the operation finished as usual. Although I had little doubt that the laminæ which were left in contact would unite, yet I could scarcely hope that this accident would not impede the success of the operation, by producing opacity of the cornea. In this, however, I was agreeably disappointed; considerable inflammation and tenderness supervened; but at this time, six months after the operation, the cornea is perfectly transparent, scarcely a trace even of the cicatrix being visible. This case may however suggest a useful caution, that when both eyes are to be operated upon, two cornea knives should be in readiness, that, if the cornea in the first prove unusually firm, the same instrument may not be used to the second, as I attribute the accident to the point being blunted by the toughness of the cornea in the first operation.—I am, &c.

Leicester, March 25th 1813.

VII.

VII.

Observations on a Species of Vaginal Hernia occurring in Labour, read at a Meeting of the Medical Society of Liverpool, November 1807. By Mr Thomas Christian, Surgeon.

The distention of the urinary bladder, which, in lingering labour, has always been regarded by the practitioner with particular anxiety, is well known to be characterized by an elastic intumescence, rising above the pubes, and extending towards the umbilicus. It is also known, that this distention, on some occasions, tends to protract labour; and that, in this state, the bladder is exposed to the risk of being materially injured in its tone or its structure. But the bladder may be distended, and labour may in consequence be protracted, where there is no intumescence above the pubes to indicate such distention. It is, therefore, of great importance to determine, when it may be necessary or not to introduce the catheter. According to the generally received opinion, there is no necessity to introduce it where there is no perceptible tumor above the pubes, although the patient may not have passed any urine for many hours together. The following case will shew that this opinion is not well-founded. It will appear that an accumulation of urine in the bladder does take place, without any tumefaction above the pubes, which not only will aggravate the sufferings of the patient in a much more considerable degree than distention of that organ in its ordinary position, but opposes an obstacle to delivery, which, on some occasions, becomes absolutely insurmountable, until the urine is discharged. In the case to which I allude, the bladder is displaced from its natural situation behind the pubes; and when in this unnatural position it is distended, the distention may either escape the observation of the practitioner, or may be mistaken by him for a disease of a different nature, requiring a different treatment. From my own experience I should conclude, that this displacement of the bladder in labour is not of unfrequent occurrence. Within the period of two years, I have met with it in four instances in different degrees, in public and private practice; but as it has not been minutely described by any author * whose works I have had an opportunity of consulting,

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* Since writing these observations, I have met with a description of a case recorded in the Medical Commentaries, Vol. V. by Dr Sandiforth, entitled, De Hernia vesicæ Vaginali.

sulting, I am led to suppose that it has been generally overlooked or misunderstood. That it does not perhaps often present an impediment to delivery in the degree which I have stated, I can readily believe; but that it does so occasionally, the following case will very clearly prove. This consideration alone, will render any apology on my part unnecessary, for calling the attention of professional gentlemen to the subject.

The natural situation of the bladder, its relation to the uterus and rectum, the change of its position in a state of distention, and the signs by which that distention can be ascertained, are so well known to every practitioner, that it would be useless to describe them here. I shall however observe, that when the bladder is distended to an unusual degree, it rises above the pubes, where the distention may be discovered by external examination. In the last month of utero-gestation, especially in patients whose pelvis is large and capacious, the gravid uterus will frequently be found to occupy the upper aperture of the pelvis, and even to have descended so low as the arch of the pubes on the approach of labour. In general, however, at this period, the uterus is situated above the brim of the pelvis, upon which it is often found resting on the approach of labour; and it descends into that cavity not until some time after labour has commenced. Under these circumstances, the bladder being within the pelvis, an accumulation of urine is commonly prevented by the pressure of the gravid uterus upon the bladder, during the pains, and by the frequent efforts of the patient to discharge the urine. From some unknown cause, this discharge is sometimes prevented; and the urine is accumulated in the bladder, forming a tumor situated either under the arch of the pubes *, or *on one side of the pelvis*. As the accumulation may be considerable, this tumor will be large in proportion; and if, when the bladder is placed in the latter situation, only a few ounces are accumulated, even this quantity will necessarily diminish, in a certain degree, the transverse diameter of the pelvis, and consequently will impede the descent of such parts of the foetus as usually present, and thereby will protract the delivery. But this is not the only manner in which such an unnatural position of the bladder appears to me to retard labour; for, in such circumstances, the dilatation of the os internum will be found a very slow process; although it is not easy to determine how that dilatation can in any degree be retarded by the displaced position of the bladder. The obstruction opposed to delivery by this peculiar position of the bladder is sometimes so great, as to resist the natural efforts of the patient for many hours after the os internum has been completely dilated; during which time, the distended bladder must be powerfully compressed, and exposed to the risk of being ruptured. Frequently, however, such extreme risk is in some degree prevented, the impediment to the discharge of urine being in part overcome by the pressure of the fœtus, produced by the repeated contractions of the uterus and abdominal muscles; and, under these circumstances, the bladder is relieved by a partial discharge of the urine, which will be found to pass during the presence of the pains. In every instance in which I have observed this affection, the labour has been lingering; and whenever the catheter was introduced, though the quantity of urine drawn off was not more than four or five ounces, yet labour uniformly advanced more rapidly afterwards, and the patient was relieved from that acute pain, which, I believe, is a pretty constant attendant upon this variety of displaced bladder. The pain is usually expressed by a kind of shriek, instead of the more general habit of moaning, or holding the breath during the paroxysms of labour.

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* As described by Dr James Hamilton, in his Report of Select Cases of Midwifery; also by Mr Astley Cooper, in his Anatomy and Surgical Treatment of Crural and Umbilical Hernia.

This derangement in the situation of the bladder is discovered by a peculiar fulness on one side of the pelvis, which is more remarkably evident during the presence of the pains. At this time, also, the fulness or tumor becomes tense, and evidently elastic; and although its boundaries are in general circumscribed, yet its base is somewhat diffused, extending along the side of the pelvis, as far back as the sacrum. It varies of course in size, according to the quantity of fluid accumulated; and in the case I have related, its diameter was equal to one third of the transverse diameter of the pelvis. When the urine is drawn off, the whole of the tumor entirely subsides, and the catheter can be distinctly traced along its whole extent, passing by the side of the vagina, from whence it may be felt running from before backwards in an horizontal direction; and it will generally be found with its concave side downwards. As the tumor is covered by the vagina, and its base diffused, there can be no danger of its being mistaken for the membranes inclosing the liquor amnii; nor does it indeed prevent the os uteri from being readily felt. If an error of this kind is at all to be apprehended, it is where the tumor is situated under the arch of the pubes (and mistakes of this kind have, according to Dr James Hamilton, actually happened); yet, however, it may be taken for a species of hernia, produced by a protrusion of the intestines, which occasionally occupies the same situation;

situation*; but the introduction of the catheter will more certainly determine the nature of the affection, than any diagnosis I can possibly establish.

Mr Astley Cooper's description of the seat of vaginal hernia. —"This hernia protrudes into the space that is left between the uterus and rectum, which allows the intestines to descend between them. This space is bounded below by the peritonæum, which is reflected from the vagina to the fore part of the rectum, and between this reflection and the perinæum is situated a loose cellular membrane. The pressure of the intestine then upon this portion of the peritonæum, forces it downwards to the perinæum, and, being unable to pass further in that direction, it is pushed towards the vagina, and projects its posterior part forward. This hernia has been sometimes found placed more laterally, producing a tumor on the side of the vagina, instead of its posterior part.

"If this tumor then were dissected, the vagina would be found covering it anteriorly; behind this is placed the peritonæum, and then the intestine would be seen in the peritonæal sac, between the vagina and rectum. I wish it, however, to be understood, that I have had no opportunity of examining this disease in the dead body, and that I am here describing it from what I know of the situation of the parts, and not from actual dissection.

"It appears, in the case which I have related †, as well as in that which I have been permitted by my friend, Dr John Sims, hereafter to describe, that this hernia contained intestine, and that will very generally happen; because, although the omentum is sufficiently long to reach into this part of the pelvis, yet it is generally situated between the intestines and the anterior parietes abdominales."

Case

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* As pointed out by Mr Cooper in the subsequent quotation.

Note.—Since this paper was written, I have seen Dr Alexander Monro junior's work, (entitled, Morbid Anatomy of the Human Gullet, Stomach, and Intestines,) who, under the article of vaginal hernia, makes the following remarks by way of description:—"The bladder of urine sometimes forms a prominent tumor at the lateral or posterior part of the vagina in virgins, and still more frequently in married women, when that canal has been reduced to a state of relaxation, from repeated pregnancies at short intervals. In some cases, the projecting bladder of urine within the mouth of the vagina, has been said to have proved an obstacle to delivery."

† Being a case of hernia of the posterior part of the vagina, which it is unnecessary to transcribe, as the above description will convey a very perfect idea of the nature of the disease.

Case of Vaginal Hernia.

MARY PARK, æt. 40, in the month of October 1805, having attained the full period of utero-gestation, began to experience labour-pains on the Saturday morning; but as they were only slight, and her former labours had been lingering, (this being her tenth pregnancy,) she continued to attend to her domestic duties until Monday morning, notwithstanding the regular recurrence of her pains; when, after a succession of several strong ones, the membranes ruptured, and then she was induced to send for the midwife. Upon her arrival, the midwife remarked, that the pains were of the bearing kind, and flattered herself with the expectation of a more hasty delivery than she was warranted in looking for, after the recollection of this patient's former labours. Upon making an examination, the os uteri was found fully dilated; and the pains continued to return regularly, with increased force, the whole of that day, but without any other effect, than that of completing the dilatation of the os internum. In the evening, as no part of the fœtus had descended into the pelvis, the presenting part being plainly felt resting upon the pubes, the midwife was at a loss to understand the nature of the impediment, and therefore requested the opinion of a surgeon. Being requested to attend, I went immediately, and having made an examination, my attention was attracted by a fulness on one side of the pelvis, which became more prominent during the presence of the pains, and, from its tense elastic feel I had no doubt but that it was occasioned by a fluid. After ascertaining the nature of the presentation, as well as the complete dilatation of the os uteri, (the edges of which had receded entirely beyond my reach,) I inquired when the patient had last voided her urine, and was informed by herself, that she had not been sensible of voiding any since the preceding night, but that she was constantly wet. Upon feeling for the bladder above the pubes externally, nothing but a solid body could be discovered. I then introduced the catheter, when a pint and half of urine was drawn off, and the instrument was distinctly felt along the side of the vagina, extending to the os sacrum. The immediate consequence was, that the head descended into the pelvis during the next pain, which satisfied my mind that the fœtus would be soon expelled. Conceiving that nothing more remained for me to perform, I took my leave of the patient, assuring her that she would be delivered in a very short time. To my great astonishment, I received a message the next morning, to visit the patient again, as she was still in labour; but was at the same time informed, that one child was born immediately after I left her the preceding night. The midwife finding there was a second fœtus, and also that the head presented, waited all night in expectation of the delivery being accomplished. It appeared that the labour-pains did not come on for several hours after the birth of the first child, at the end of which time they returned in considerable strength and frequency, and continued to do so until my arrival, but to no effect. On examination, I found the same distention of the bladder as before, and the urine was drawn off with the same immediate effect, as she had not more than three pains afterwards, when the second child was born. No further difficulty occurred in passing the water during her recovery, nor has she at any time since experienced the least inconvenience either in retaining or voiding that secretion.

It may not be improper to remark, that the subject of the preceding case was under the necessity of being delivered by the forceps, in the second labour but one preceding the present; and that the labour immediately succeeding it was also extremely tedious.

One of the other patients in whom I have observed the same affection, had in a former labour a preternatural presentation; but, whether this displacement of the bladder existed or no, I cannot determine, as I was called to her in consultation after she had been a considerable time in labour, and the feet and hand were forced into the pelvis, whilst the head was found resting upon the brim. The other two patients had very tedious deliveries upon every occasion, though the pelvis in all was of the ordinary dimensions.

Whether this is a casual affection, or depends upon any peculiar conformation, or even upon certain morbid changes in the parts connected with the bladder, I cannot at present determine, but am inclined to adopt the first opinion. That it may operate in preventing delivery for a time is certainly ascertained; that it might have caused the difficult and tedious labours in the first patient's former births is highly probable; and that it might also have contributed to produce the preternatural presentation in the other patient's case, is, I think, not less probable.

If therefore, the preceding remarks should tend to illustrate a subject not generally understood, or prevent the consequences which might arise from mistaking the nature of this species of tumor, and avert the risk of their being opened *, or should they

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* A practice successfully adopted in some cases of tumors in the pelvis, impeding delivery, related by Mr Park, (in the 2d Vol. Medico-Chirurgical Transactions,) but which requires very great discrimination and judgment in its adoption, as was illustrated in one of those cases in which I attended with Mr P.

they lead to the more general use of the catheter in different kinds of lingering labour; thereby lessening the sufferings of the patient, and preventing that danger to which the urinary bladder is, in particular circumstances, so much exposed; in either case, I shall feel myself very amply gratified.

Liverpool, March 1813.

VIII.

On the Effects of Cold Water given Internally, or applied Externally, in Four Cases of Abdominal Inflammation. By Mr T. Smith, Surgeon, Kingussie.

The signal advantages which have been found to result from the abstraction of morbid heat, by the application of cold water in general fever, have induced some physicians to think that it might prove equally salutary in symptomatic fever, arising from high local inflammation. This opinion, so contrary to the sentiments and habits of the majority of the profession, does not, however, appear to have been, hitherto, fully tried, or recommended to practice, by the surest of all tests—experience, which, in medicine at least, often confounds all reasonings *a priori*, and overturns every conclusion built upon analogy. In this state of the question, which cannot but be considered as important and interesting, I take the liberty to transmit the following cases of abdominal inflammation, in which cold water was employed, at first accidentally, and afterwards as a remedy, internally or externally, or both. These cases, which contain the whole of my experience for or against the use of cold water in that disease, are circumstantially detailed, in the hope that, if they are thought worthy of a place in your Journal, they may suggest some useful considerations to those who may be inclined, hereafter, to make trial of the same practice in similar circumstances.

Case I.

On Friday, the 8th May 1812, I was called to John Macedward, mason in this village, aged about 30 years. On the 6th, after breakfast, he was suddenly seized, without any previous indisposition, with cold shiverings, followed by a violent pain in his belly, and vomiting. Before I was called, he had tried, by the advice of his neighbours, ardent spirits and pepper, castor oil and injections. The first of these produced an aggravation of the pain; the latter were rejected without procuring a stool. I found him complaining of violent pain in the whole right side of the abdomen, particularly in the hepatic region, greatly increased by a full inspiration, and by pressure: also of sharp pains, shooting occasionally to the right groin, attended with a sense of numbness of the right thigh, so great as to impede his power of moving that limb. He had incessant vomiting, or retching to vomit. His eyes and skin were of a yellow colour, which, I was informed, appeared within the two preceding days; abdomen tense and hard; skin hot and dry; tongue white; thirst great; pulse 100, full, and somewhat soft; urine scanty, hot, and high-coloured. Upon inspection, I found that the part of the groin where he complained of the darting pain, was below Poupart's ligament, at the place where femoral hernia protrudes; but, on the most careful examination, I could not discover the least tumor or swelling; nor did pressure create or aggravate the pain: and the patient assured me that he never had a rupture.

I drew about twenty ounces of blood from his arm; ordered a large blister to the part affected, and a clyster to be administered. The bleeding almost completely relieved the pain; but the clyster was retained, and he continued to vomit from time to time, the matter vomited being a little feculent. The blood drawn was not sizy. The pain having recurred with violence in the course of a few hours, and the injection being voided without feces, he was again bled to the extent of twenty ounces, which produced a great and immediate mitigation of the pain. This blood was sizy, with a firm cupped crassamentum. Another clyster was soon after injected, which brought off some feces. The remaining part of this day, he continued free from pain, except upon pressure, or a full inspiration, and when he attempted to lie on his left side, he complained of a pricking sensation in the whole right side of the abdomen. He had no other stool, and the feculent vomiting returned. He was ordered a pill, containing one grain of aloes, and one of calomel, every hour, till a motion should be procured. At two o'clock, A. M. of the 9th, I was called to see him. The pain was as violent as ever; vomiting incessant; no stool. I again drew about twenty ounces of blood from his arm, by which he was again relieved. I desired the warm bath to be prepared. Before eight o'clock, A. M. the pain recurred with aggravated violence, and he was put into the warm bath without benefit. Before this, the vesicatory had been removed, but had not operated, the skin underneath being only thickened and shrivelled. Pulse 120, hard, contracted; and he had vomited a large quantity of matter, resembling coffee-grounds; thirst urgent; heat of skin pungent and equal. I made the patient be supported in bed by an attendant, and drew from his arm, in a full stream, 24 ounces of blood. He fainted, and, while I was binding up the arm, had a pretty copious liquid alvine evacuation, of a natural appearance. On recovering from the swoon, he felt himself perfectly free from pain. The whole of this blood, as well as of that drawn in the morning, exhibited, on cooling, the buffy coat, with an exceedingly firm cupped crassamentum. A large blistering plaster was again applied to the abdomen. At nine o'clock, P. M. the report was as follows: Pain has not recurred during the day; has had repeated discharges of flatus per anum, but no feculent dejection; has vomited his drink twice or thrice, and has still considerable pain on pressure; pulse 120, and hard; thirst urgent; is extremely desirous that he should be allowed to drink cold water; but this it was not thought prudent to permit. On the morning of the 10th, the pain having twice recurred with excruciating violence, I was again obliged to have recourse to the lancet twice, at the interval of a few hours. This blood (about 46 ounces in all) was still sizy, cupped, and firm. After the last bleeding, the pulse, which before was hard, contracted, and about 126, became 140, and soft; the pain was perfectly relieved; the vesicatory had not operated, and was now removed. At eleven o'clock, A. M. (two hours after the last bleeding), I visited him, and found him in the following state: His countenance fallen and cadaverous; respiration panting, and oppressed; the pain of which he formerly compained was gone, except at intervals a momentary twitch in the right groin; he was constantly changing his posture; his extremities were cold and clammy; and his pulse could no longer be felt at the wrist; his demand for drink was incessant, and what he drank was vomited almost as soon as swallowed. Except the oppressed breathing, his chief complaint now was a sense of burning heat in the stomach and abdomen, and he again earnestly intreated that he might be allowed to drink cold water. His request was now complied with: and I shall relate here, minutely, its apparent effects, which I watched with anxiety, and noted with care.

I gave him, at first, about two ounces of water, at the temperature of 45° Farenh. This he swallowed greedily, and said it gave him much comfort; no pulse; he soon vomited the water. (It is proper to mention, that his feet and legs were from this time kept constantly immersed in hot water, as long as I continued to administer the cold drink.)

I next gave him about four ounces of the cold water. Immediately after he had swallowed it, I thought I felt the artery at the wrist vibrate under my finger, but cannot be certain that it did so. He again soon vomited a part of the water.

In a short time he called for more cold water. I gave him about a pint of it, allowing him to drink it off, if he was so inclined. He drank it off at one draught. With inexpressible satisfaction I felt the pulse, almost instantly, commence at the wrist, and it continued to beat very distinctly, and with tolerable firmness, 134 times in the minute.

Half an hour elapsed before he was allowed any more of the cold water. In the course of that time, he vomited twice, and twice had a sharp, but momentary, twitch of pain in the right groin. The spot being again examined, no swelling could be perceived, nor did he complain of the least pain when it was firmly pressed upon.

At the expiration of the half hour, he drunk another pint of cold water. Soon after it was swallowed, a gurgling noise was heard in his bowels, followed in a short time by an involuntary copious liquid alvine evacuation, accompanied by much flatus. His pulse, after this, beat 128 in the minute, full and regular. After this I remained with him upwards of an hour, during which he continued free from pain and thirst. The vomiting was much abated, and, before I left him, a gentle warm moisture began to appear upon his face, neck, and upper extremities. His body I did not feel, and his legs were immersed in warm water.

Two o'clock, P. M.—Has drunk some glasses of wine, but no cold water since I left him; pain and thirst have recurred; pulse 138; heat of surface great and distressing to his feelings. I caused the quantity of bed-clothes to be diminished, forbid the use of wine, and gave him upwards of a pint of cold water to drink, with the effect of procuring immediate relief from every uneasy sensation. The pulse fell to 128, and he had soon a considerable discharge of flatus, and voided a large quantity of urine, without pain or difficulty.

Seven o'clock, P. M.—Has almost incessant hiccup; the vomiting has entirely ceased; no stool; has made water largely, and frequently; no thirst or pain, an uneasy sense of fulness in the abdomen excepted; pulse 120, somewhat contracted; has drank upwards of seven pints of cold water. Injiciatur statim enema domestic. Eleven o'clock, P. M. The clyster succeeded in bringing off a large quantity of liquid feces, and the hiccup ceased; soon after he had another stool, spontaneously. He has again drunk very largely of the cold water, and the hiccup has returned; no vomiting; sweats profusely. I ordered another clyster, and desired him to drink more sparingly.

11th, In the morning. The clyster operated; afterwards he had two other motions spontaneously. Since last night he has had no hiccup, vomiting, or pain; pulse 112, soft. Nine o'clock P. M. Has slept the greater part of the day, and continues to perspire; has had two stools, thin and fetid; pulse 120; belly somewhat hard, and lying on either side creates pain.—Capt. pilul. cum calomelanos gr. iv.

12th. Eight o'clock, A. M. Has had three or four stools intermixed with scybala; no pain; no thirst; pulse 117.—Eight o'clock, P. M. Has had three stools more during the day, scybalous as before; has still occasional pain in the groin, and complains of considerable pain in the belly, near the spinous process of the ilium, where there is found some swelling and hardness; this part is extremely sore when touched; pulse 112. Rep. pilul. ut antea.

13th.—Nine o'clock, A. M. Between two and three o'clock this morning, he was seized with considerable pain in his belly, with a sense of heat and thirst; he called for cold water, and drank, at repeated draughts, between two and three pints of it. The pain ceased, and soon after he had a motion to stool, which recurred no less than eight times in the space of two hours, with the effect of bringing off an enormous quantity of very offensive feculent matter, intermixed, as before, with hard scybala; has enjoyed an uninterrupted sleep almost ever since; pulse 105; can lie on either side, and can bear the abdomen to be firmly pressed, without pain.—Ten o'clock, P. M. Is more uneasy; pulse 120; tongue brown and dry; begins to dislike the cold water; he took some during the day, and felt it disagreeably cold in his stomach, and said that he had some sharp stitches in his breast, with cough afterwards. While I was present, he vomited, for the first time since the 10th, and, by the fluid vomited, I discovered that he had been drinking wine. I desired him to abandon the drinking of cold water, strongly forbid the use of wine; and, having no stool since the morning, he was ordered another pill.

14th.—Diarrhœa has returned, and he feels much relieved; feces of a yellow colour, mixed with dark green; pulse 112; some thirst; cough, with mucous expectoration; coughing produces pain in the groin; no perceptible swelling there.

15th.—Diarrhœa continues, very thin; pulse 120; other symptoms as before.—Capiat hora somni haust. anod. c. tinct. opii gutt. x.

16th.—Slept well; diarrhœa still continues, but the stools are less frequent; pulse 112; feels pain in the groin now when pressed.—Rep. haust.

17th.—Pain in the groin has been greater to-day, but is relieved when he discharges flatus; diarrhoea as before.

℞ Potionis carb. calcis, ℥vß.
Tinct. kino ℥ß. M. capiat cochl. mag. i. post omni sede liquida.
℞ Haust. h. s. c. tinct. opii gutt. xv.

18th.—Expectoration copious, of a thick white mucus, in one instance tinged with blood; sweats profusely; has had only one stool to-day; pulse 100; tongue moister; cannot lie on either side; pain in the groin considerable at times, especially when he coughs. On examination, the groin is now evidently swelled; upon pressing with the fingers, the crackling of air is felt under the integuments; being pressed, it seems to retreat below Poupart's ligament, and returns forcibly when the patient coughs. Applicetur cataplasm. emol. inguini, et rep. haust.

19th.—Swelling in the groin larger; skin inflamed. Towards the edge of the anterior spine of the os ilium, a hardened line, about four inches long and one inch broad, is felt, which is very tender when touched, but no redness appears in the skin. Cough less; pulse 105 to 110 to-day; had two formed stools.—Omitt. haust. anod. et mist astring.

20th.—Tumor enlarging; three copious soft stools; pulse in the morning 99, in the evening 105.—Rep. haust. anod. c. tinct. op. gt. xx.

21st.—The tumor in the groin pointing, it was opened to-day, and nearly a pint of thin white purulent matter, of a very offensive smell, issued out, accompanied with much air, and some long shreds, as of decomposed membrane; he slept well afterwards; pulse 95.

22d.—Slept well during the night; sweated profusely; has an appetite for food; discharge of matter copious and fetid. Feels some pain in his back and loins to-day, when he coughs; pulse in the morning 95, evening 100. Rep. haust. anod.

23d.—Pulse in the morning 96, evening 100; sat up twice for half an hour to-day; much fetid discharge; two stools.—Rep. haust.

24th.—Discharge in the morning less fetid; pulse 90; tongue moist; in the evening discharge less; considerable pain in the groin; pulse 106.

25th.—Discharge copious to-day, of air and matter; tongue white; one stool; pulse 96, evening and morning.

26th.—Discharge copious, without fetor; strength improves; pulse 96; sat up out of bed to-day.

27th.—Had some pain to-day, which was relieved by a free discharge of matter; one costive stool; thirst; pulse 94.

Capt. pilul. cal. unam, n. a. et haust. anod. h. s.

28th.—The wound being enlarged to-day, gave vent to much pus, free of fetor; pulse in the morning 88, evening 92.

Here my reports of this case close. On the 29th, I was under the necessity of going to a distance of 50 miles, and, on my return, on the 2d of June, had the mortification to learn that this poor man had died the day before. All I could learn farther of his case was, that on the evening of the 30th, or morning of the 31st, he was seized with a violent return of pain, which continued more or less the whole of Sunday the 31st. A medical gentleman, who was accidentally in the country at the time, and who did me the favour to take charge of this patient in my absence, attended him with great care and humanity, from the time of his relapse to his death. But as that gentleman left the country the same day that I returned, I had no opportunity of learning the particulars from him. I regret that I was not permitted to ascertain, by dissection, the source of the purulent discharge; the internal accumulation of which probably hastened, if it did not occasion the patient's death.

CASE II.

On the 21st day of July 1812, I was requested to visit WILLIAM MACINTOSH, labourer, Neudmor, who, five or six days before, had been seized with violent pain in his bowels, attended with obstinate retention of feces, and vomiting. I found him in the following state: He complained of pain in the abdomen, but said it was easier than it had been; his abdomen was tense and hot, and I could distinctly feel the fluctuation of a fluid within the parietes; pressure gave much pain; he complained of a burning heat in the abdomen; great thirst; vomiting; hiccup; respiration quick and laborious; pulse 138, extremely feeble; hands and nails of a purplish colour; countenance sunk; voice faint and tremulous; urine scanty, hot and high-coloured. Clysters have been repeatedly given, but no alvine motion has been procured, except by the first, administered at the commencement of his illness. He has vomited every thing given by the mouth. I ordered a large clyster to be injected, but, after waiting some time, finding it was not returned, I applied cloths wet with *cool* water to his abdomen, renewing them as they became hot; and as he found this highly agreeable and refreshing, I resolved to venture one step farther, and ordered him to be taken out of bed, naked from his waist downwards, and supported by two attendants, with his feet upon the floor (which was a damp earthen one) while I dashed several pailfuls of *cold* water upon his legs, thighs, loins, and abdomen. The first obvious effect of this treatment was upon the strength of the patient. At his first getting out of bed, he was totally unable to stand without support; but after the water was applied three or four times, he could walk about the apartment alone, and at last, when he saw a pailful of water aimed at him, he sprung aside with great agility to avoid it. I desisted, on perceiving this symptom of dislike. Being questioned as to his feelings at this time, he said that the pain and sense of heat within him were gone, and, except in his legs and thighs, he had not felt cold since he left his bed.

Before going to bed he took a few turns about the apartment, and in two or three minutes had a call to stool, and voided the clyster, mixed with some very fetid matter, and two or three hard scybala; at the same time he had a copious evacuation of urine. Being dried and put to bed, and bottles with warm water applied to his feet, after resting a little, his pulse was found to beat 124 in the minute, fuller and firmer; his voice was stronger, and his respiration more slow and easy. On taking my leave, I desired that he should drink only cold water when his thirst demanded; that cloths wet with cold water should be applied to the abdomen when the heat and pain returned; and that he should take every three hours a powder containing

Supertart. potass. ʒi.
Nitratis potass. pulv. glycyrrhiz. āā gr. v. M.

23d.—He was carried in a cart to-day to his brother's house, at the distance of nine miles from his former place of residence. I saw him in passing through this village; he complained of no pain in his abdomen but what the shaking of the cart created; has had several stools, intermixed with portions of indurated feces; has not vomited since last report; thirst less; pulse 88; has drunk cold water, and had cloths wet with cold water applied to his abdomen repeatedly.

24th.—By message I was informed that the looseness was excessive. I sent an astringent mixture, desiring a spoonful to be taken after every loose stool.

25th.—I was called, and found him complaining of tenesmus and griping pains in the belly, aggravated by drinking cold water; acid vomitings; abdomen tumid, extremely tender to the touch, and appearing to contain a larger quantity than before of effused fluid. Applicetur abdomini emplast. mag. vesicat.—Capiat omni bihorio, donec subsideret vomitus, magnesiæ gr. x.

30th.—I was informed to-day that the blister operated well, and that the vomiting ceased soon after he began taking the powders, but that the swelling in the belly continues, though without pain. Continuentur pulv. diuretic.

August 28th.—This patient called upon me, having walked ed seven miles. I found his abdomen less swelled, though a fluctuation was still perceptible. He had no thirst; his bowels were regular, and he voided his urine in sufficient quantity. In the begining of December he again called upon me, having been to the harvest in the south since last report. He had recovered his health and strength completely, and every hydropic symptom had disappeared.

CASE III.

August 20th, 1812, I was called to the wife of Hugh Ross, carpenter, Dunaughton. She had been delivered of a child on the 15th, and on the 17th was seized with cold shivering, and pain in the belly and head, the lochia and secretion of milk being greatly diminished. I found her in the following condition: Respiration quick, oppressed and suspiratory; pulse 150, extremely feeble, and at times intermitting. She complained of pain in her belly and forehead; her abdomen much tumefied, hot, and so tender that she could hardly bear it to be touched. Her attendants said that she was at times delirious, and that she had a second shivering of cold a short time before I arrived. She vomits frequently, and the fluid vomited is very acid; tongue dry and brown. She does not complain of thirst, but drinks with avidity when it is offered her. Hands and feet cold; lochia suppressed; mammæ flaccid. She is said to have had one or two loose stools to-day of a frothy appearance. The chalk mixture was given her, and cloths wet with cold water were desired to be applied over the whole abdomen.

21st.—I saw her early this day. The cold cloths have been applied frequently, with much relief to the feelings of the patient. She has had two or three loose stools; vomiting has ceased; appears less debilitated to day; abdomen still tumid, hot and tender; pulse 135.

I now renewed the cold applications, which had been abandoned for some hours, applying cloths wet with cold water in which salt was dissolved, and renewing them as soon as they became hot. This practice was continued for about an hour, after which, upon examining the pulse, I found it 108 in the minute, and full. The patient expressed no uneasiness from the cold applications; on the contrary, she said they removed that sense of heat internally, which she had felt most distressing; and I observed, that after the cold water had been applied some time, the tenderness of the abdomen became much less, so that at length she could bear it to be firmly pressed without experiencing almost any pain.

23d.—By message, I was informed to-day that the looseness continued with the effect of weakening her extremely, and that she had considerable cough and pain in the belly, aggravated by cold drinks, which she had taken by my directions. I sent some chalk powders, with orders to give one after every loose stool; and desired her drinks to be made warm.

28th.—I was called to visit her to day. She had been much easier, though very weak since last report, till yesterday evening, when she was seized with a return of pain in the abdomen; pulse 128; tongue foul; thirst; cough; no stools.

Applicetur abdomini emplast. mag. vesicator. et capiat omni bihorio, donec exoneretur alvus, Pulv. rhei, Pulv. glycyrrh. āā gr. v. M.

This patient residing at a considerable distance from me, I did not see her again till about three weeks after the date of the last report, when, upon calling, I found her on foot, with no complaint, except occasional pains in the abdomen, which appeared to arise from costive bowels. She was now nursing her child, and had abundance of milk. By the occasional use of the pil. rhei comp. she was soon liberated from the pains, and now enjoys a good state of health.

Case IV.

February 2, 1813.—Hugh Mackay, miller, Arbreilich, was suddenly seized this morning after going out, with violent pain in the abdomen, about the navel, and between that and the spinous process of the right os ilium, with general coldness and excessive weakness, so that he could not stand. I saw him about two hours afterwards; pain as before, and unremitting; feet cold; no heat of skin; tongue clean; pulse 64 and firm; had one alvine motion soon after the pain began, and has since had frequent desire to go to stool, but without being followed by dejection of any kind. Vomits frequently; has some thirst; took some ardent spirits but vomited it immediately. I drew 20 ounces of blood from his arm; gave him an ounce of the ol. ricini; made warm fomentations be applied to the abdomen, bottles with warm water to his feet, and the enema domesticum to be injected.

3d, eight o'clock A. M. The oil was rejected soon after it was taken; several clysters have been given, but all of them have been returned without feces; pain as before: pulse 60; no heat or tension of the abdomen; tongue white; blood drawn not sizy. He was ordered another ounce of the ol. ricini, and to refrain from drinking, in order if possible to prevent the oil from being vomited.

4th, 10 o'clock P. M.—Having been called off to a distance, I did not see him since last report till now; pain worse and more extended; the oil was vomited after being retained upwards of two hours; many injections have been given, and he has been put into the warm bath twice, without effect; pulse 72, full and hard; abdomen very tender to the touch, but not very hot; other symptoms as before; desires cold water to drink, but has not been allowed it by his attendants. I again drew about 20 ounces of blood from his arm; ordered him a pill, containing two grains of aloes, every hour, and cold water to drink when he desired it.

5th.—Has not vomited since last report; pain was easier during a great part of the night, but is now violent; no stool; urine hot and high-coloured. The patient says that his drink during the night was *cold*, but that, since morning, his attendant refuses to give any but *warm* drinks. Blood last drawn cupped and sizy. Knowing the reluctance of those about the patient to cold applications of every kind, I gave him myself a draught of cold water, and administered, with my own hands, a clyster containing upwards of two pints of *cool* water. The patient, who before was almost screaming with the pain, became immediately quiet, and in less than two minutes voided the injection, with some portions of soft feces. In about half an hour, notwithstanding that the patient continued easy, I administered another clyster of the same kind, which was again returned with a still larger quantity of soft and apparently broken down feces.

6th.—Slept well during the night, and perspired considerably; continues free of pain; no stool; no thirst; pulse 60, soft.

7th, 4 o'clock, A. M.—While under profuse perspiration, he awoke about an hour ago, with a cold shivering upon him, and the pain in his belly recurred with aggravated violence; feels nausea, but has not vomited since it began; pulse 70, full, throbbing; thirst great, but he has refrained from drinking. I bled him to the extent of 22 ounces, which somewhat abated the pain; ordered him a powder, containing 2 drachms of cr. tart. every hour in cold water; at the same time a clyster, as warm as he could bear it, was injected, but returned without feces.—10 o'clock A. M. Pain violent, much increased by pressure and by a full inspiration; abdomen full, hot, tense and hard; urine hot and scanty; pulse 72, hard; thirst less since he began taking the powders; has not vomited; blood last drawn exhibits a strong buffy coat.

I now applied a cloth wet with cold water over his abdomen, making it be renewed as soon as it became hot, and again administered a clyster, containing upwards of two pints of cold water. These applications again acted like a charm. They were felt refreshing and agreeable to his feelings, and almost instantly relieved the pain; and in a short time the injection was voided, with considerable quantity of unformed and highly offensive feces, attended with large discharges of flatus; the pulse fell to 60, soft.

8th.—Continues taking the powders, and cold cloths have been repeatedly applied with relief to the returning pain; has had two or three loose spontaneous alvine motions; no thirst or pain at present; abdomen soft. Cont. pulv.

9th.—Has a gentle diarrhœa, but has never passed any indurated feces; pain has not recurred; pulse 54, soft. From this time the patient had no relapse, and rapidly recovered without further treatment.

To these cases, I beg leave to subjoin the following summary of the effects which appeared to follow the application of the cold water.

1st, A cessation of the pain and sense of burning heat internally, and of the thirst and vomiting.

2d, In one case, a restoration of the pulse after it could no longer be felt; in two others, a diminution of its frequency and increase of its fulness and strength; and in the last, a decrease of its frequency and hardness.

3d, An increase of the voluntary powers was observable in all the cases, particularly in the second.

4th, An increase of the action of the intestinal canal, by which its contents are propelled; also an increase of the secretion of urine, and of the muscular power of the bladder.

These effects evidently followed the application of the cold water in the preceding cases, *when the heat in the abdomen was great and distressing, and when the cold applied was felt agreeable, or at least not disagreeable to the feelings of the patient.*

But *when it was felt unpleasantly cold*, it appeared to create or increase the pain in the abdomen, and stitches in the breast and cough; not to mention other symptoms which followed more remotely, and which, in this nascent state of the inquiry, it would not become me to say were or were not effects produced by the cold water. One striking coincidence, however, was observable, with regard to the time at which these symptoms of irritation were produced by the cold water in the three first cases. In all of them, these symptoms followed its use immediately after a considerable diarrhœa. Are we to infer from this, that the superfluous heat was, in a great measure, removed by the diarrhœa, leaving the bowels in a state similar to that which is produced in the system at large by profuse perspiration?

I shall conclude with observing, that, in laying these cases before

fore the public, it has not been my wish to magnify the virtues, or throw a veil over the dangers attending the administration of a powerful remedy; but, by an open and circumstantial relation of facts, to assist, as far as my experience and limited sphere of observation permit, in ascertaining the rules by which its application may be rendered safe and efficacious, in a hazardous and often intractable disease.

Kingussie, March 19, 1813.

IX.

Case of Hæmatemesis. By Mr William Cooke, Member of the Royal College of Surgeons, London.

The history of Dr Walsh's case of Hæmatirrhœa, in the last number of the Edinburgh Medical and Surgical Journal, induces me to send one of Hæmatemesis.

However accumulated the evidence may be, that similar morbid actions sometimes occur under very different circumstances, yet, perhaps, every striking instance is still calculated to do good, by counteracting a propensity to make general deductions from a few isolated facts.

The subject of this case was a young lady of an extremely vivacious and active disposition, whose earliest years were spent in London.

At three years of age she was attended by Dr Lettsom, in consequence of bilious affections, who perceived that her liver was enlarged. Reiterated attacks of hepatic disorders induced her removal into the country, from which she derived considerable benefit.

In August 1810, when about thirteen years of age, she was attacked by vomiting of blood, which continued several days: her amendment, however, was progressive, until interrupted by a relapse towards the end of the year.

At this time menstruation had not commenced, and consequently we looked for its occurrence as a crisis likely to effect a salutary revolution in the system. After a succession of vicissitudes, occupying several months, she again became convalescent. The catamenia appeared, and, from the advances towards established health that were now made, her friends congratulated themselves that she was outgrowing all the imbecilities of early life, and the more imminently dangerous attacks of later years.

The bodily functions continued to be performed with regularity until the 26th of April 1812, when excessive vomiting of blood suddenly took place. The attack commenced about three o'clock in the morning, and at four I saw her. As nearly as I could guess, she had then ejected two pints of fluid, chiefly florid blood. She was very faint, and had considerable pain in the epigastric region, especially before each act of vomiting. Her pulse was quick and vibrating, and the intervals of vomiting seldom more than fifteen minutes.

At the beginning of the first attack some blood was drawn from the arm, and nitras potassæ, digitalis, &c. were administered, but the infusum rosæ seemed most useful. As the hæmorrhage was more profuse now than it had been before, I had recourse to the infusion immediately, combining sulphate of magnesia or laudanum, according to circumstances.

The skin being hot, cloths dipped in vinegar and water were applied to the epigastrium, from which she experienced great relief and pleasure, and often solicited their repetition.

The intervals of vomiting during the day were longer, but early the next morning she threw up a large quantity of blood, and became extremely faint.

In consequence of taking the sulphas magnesiæ and a dose of calomel and jalap, the bowels had been freely evacuated, and the stools were bloody. Whilst sitting at the pot she was seized with convulsions, which lasted some minutes. Her strength was now greatly reduced, and, as quietude seemed essentially requisite, she was forbidden to rise from bed again.

On the 28th the intervals were still longer; but occasionally the quantity of blood vomited was large in proportion as the time between each act was protracted. She now complained of acute pain, extending from the right hypochondrium to the scapula.

29th.—No vomiting.

During the 30th it came on again with violence. The pulse still quick and vibrating, and thirst great; her bowels were open, and body felt universally sore. She was lifted from bed once to have a stool, and experienced another convulsive paroxysm. In the evening her speech was nearly inaudible, and life seemed almost exhausted. The retching of blood continued.

Although we had now no hope of our young friend's recovery, yet we sedulously persevered in our exertions.

Instead of the infusum rosæ, she was directed to take decoctum cinchonæ cum acido sulphurico, and the following pills:

℞ Sulphatis zinci gr. v.
Pulveris digital. gr. iij.
Opii gr. iss.

Cons. rosar. q. s. ut fiant pilulæ vj.
Capiat 1. secunda quaque hora.

When the nausea excited by the pills became very distressing, they were taken less frequently.

Her support was chiefly derived from jelly of hartshorn shavings, isinglass, and crust of bread; and when faint she took some port wine.

Although the vomiting did not immediately cease, yet there was no further appearance of blood. Her stomach felt so extremely repugnant to the bark draughts, that the infusum rosæ was substituted.

During the next ten days she fluctuated greatly, being sometimes cheered by the hope of increasing strength, and at others depressed and agitated by threatenings of relapse.

Whenever the palpitation came on, with a hot skin, the application of vinegar and water invariably proved serviceable. Her bowels were kept open by the sulphas magnesiæ and occasional doses of calomel, whilst she persevered in the astringents.

On the 10th of May she had an accession of headache and delirium; which were relieved by cordial tonic medicines, and a blister to the neck.

From the 26th of April, to the first of May, I calculate the patient lost between four and five quarts of blood. I should not have ventured to express this opinion, had not the succeeding attack afforded an opportunity of forming a more accurate estimate than was attempted before.

She was necessarily reduced to the lowest state of existence, and it will readily be conceived, that her recovery must have been extremely slow and difficult.

In the months of May, June, and July, she had successive indications of peritonitis, hydrothorax, icterus, dyspepsia, and tympanitis, and suffered frequent acute pains in the liver whilst under the three latter affections.

She took frequent doses of calomel, and saline or tonic medicines, with or without diuretics, as the symptoms appeared to demand.

About the middle of August, she took the mistura ferri composita with advantage, and went to Dover. Here she continued her medicines, and used the warm bath at from 93° to 96°. Her stay was but short, and did not prove very useful. By the end of October, however, she was evidently gaining ground, her pain had subsided, and strength was recruiting.

In November, the left side felt uneasy, and on examination I found the spleen enlarged, and that some fulness existed in the right side, but no trace of the liver was perceptible. By the use of calomel these enlargements were reduced.

In December and January, she continued to improve in health, grew strong and fat, but usually had a tinge of yellowness, notwithstanding the frequent employment of calomel to keep the bowels regular.

On the first of February, she had some return of pain and fluttering in the region of the liver; pulse was quick; and the stools nearly black, but not bloody.

℞ Sulphatis magnesia ʒi.
Infusi rosæ ℥i. Misce, ft. haustus 6tis horis sumendus.

℞ Submur. hydrargyri, gr. iij.
Carbonatis calcis, gr. iv. Misce, fiat pulvis alterna vel tertia quaque nocte sumendus.

The bowels were freely opened; the stools were yellow, and on the fourth she appeared well.

Although she was now pronounced *well*, it must be understood in a comparative sense.

I have been informed, since her death, that she often complained of violent pain shooting from the stomach through the sides to the back and shoulders, but which generally went off after eating a crust of bread.

Her spirits were now lively, except when she anticipated the approaching spring. Associating, by recollection, the whole past year's suffering with the attack in April, she looked forward to the returning season in expectation of a relapse. She walked and rode out, but cautiously avoided much fatigue. The catamenia and bowels continued regular.

On the first of April 1813, she manifested unusual cheerfulness, which had been a precursor of former attacks. She slept soundly until one o'clock, and then awoke with sickness, alternations of heat and cold, faintness, and considerable throbbing at the stomach. At two o'clock, A. M. I saw her. She had retched several times, but brought up nothing. Skin felt cool; pulse frequent. The heart was palpitating violently. Very soon after this, she brought up some fluid resembling coffee-grounds, and before eight o'clock in the morning, had thrown up about three pints of blood.*

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* As I had often regretted, that no method had been adopted to ascertain the quantity of blood this patient lost before, I requested the fluids might stand for some hours, and then only the coagula to be measured. By this means I thought it probable we should have less adventitious matter than if measured in a fluid state, and that, in estimating the quantity of blood, we may add half the quantity of coagulum for the separated serum.

Aware

The treatment corresponded with that we found most successful before. The pills with sulphas zinci soon excited nausea, and appeared to restrain the hæmorrhage, for although she vomited twice in the day, no blood was ejected.

During the night the retching again supervened, and the quantity of blood thrown up measured about three pints.

April 3d, 8 o'clock A. M.—Pulse 130, and vibrating; countenance sunk. Her nutriment consisted of light fluids, and occasionally a little port wine. She had relief from the bowels once in the night, and being lifted out of bed was seized with convulsions. After this she was kept quiescent.

During the day she had seven stools, which I presume contained a pint of blood. At night she was comfortable; pulse quick, skin cool. In the night she had three offensive and bloody stools.

4th, 10 o'clock A. M. She felt sick, and complained of great throbbing at the stomach; pulse was very quick; she made but little water; pressure in the epigastrium excited sickness, but occasioned no pain; a little yellowness was perceptible about the eyes.

In the course of the day the vomiting recurred several times, and about two ounces of blood were thrown up. She had another convulsive paroxysm, notwithstanding her continuance in bed. At night the pulse was very quick and irregular, thirst considerable, and palpitation so great as to be occasionally audible to a person sitting at the bed side. The night was passed nearly without sleep. She had two bloody stools, and at four o'clock A. M. vomited about four ounces of blood.

At ten o'clock, A. M. April 5th, the pulse was 130, and the palpitation and thirst distressing. The dose of sulphas zinci was lessened, to allow its being given more frequently without exciting to vomit.

The stomach continued at rest throughout the day; the bowels were opened twice; the palpitation diminished, but reproduced by the least exertion. The pulse was 130, and less hæmorrhage.

At ten o'clock P. M. about four or five ounces of blood were thrown up, after which she was cold; but experienced some revival from a little caudle.

April 6th, at seven A. M. she was very low, and had frequent convulsive twitchings in the arms. She takes broth and beef tea, strongly

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Aware too, that morbid, hepatic, and intestinal secretions are often mistaken for blood, when of very dark colour, I poured water into the bed-pan, and when the feces imparted a red colour, I concluded they contained blood. At present, however, I cannot answer for the correctness of either method.

strongly impregnated with meat, freely. She had no sickness during the day, but was restless.

Imponatur vesicatorium sterno.

April 7th, In consequence of taking a tea-spoonful of tinctura camphoræ composita, the preceding night, she had sound rest until three o'clock. From this time she continued to talk incoherently and loudly, until about three P. M. when she became comatose. The blister rose well. Her pulse was quick and weak, and the palpitation lessened. Her arms were tossed about, and when raised by an apparently unnatural effort, they were suffered to fall by their own gravity in any position. The tongue and mouth were nearly colourless from the want of blood. Deglutition was performed with haste throughout the morning, and, after the supervention of coma, she could only be roused to take two or three spoonfuls of sago. In the evening respiration was laborious, and about eleven o'clock she died, without the least motion.

From April 2d to the 5th inclusive, we think she lost between four and five quarts of blood. It had usually the venous character, but once was as florid as arterial blood.

Sectio Cadaveris.

With the assistance of Mr Langstaff (a gentleman whose pathological researches have been very extensive), I opened the body on the 9th inst.

The omentum and external surface of the stomach and duodenum were natural, except that the fat had an unusual yellow appearance. The jejunum, ilium, and colon, had a dark aspect, apparently in consequence of matter contained in them, by which they were much distended.

The liver was very considerably enlarged, extending into the left hypochondrium, of a reddish colour, and scirrhous throughout; the gall-bladder was distended, the coats thickened, and the bile apparently black, but, in dilution with water, became yellowish green.

The spleen was enlarged to double its natural size, resembling in firmness and colour healthy liver.

When the stomach was opened, it was found to contain only the sago taken a few hours before death. The villous coat seemed natural, except near the cardiac orifice, where there was a very circumscribed appearance of inflammation, and a more extensive one of ecchymosis. On the membrane of the œsophagus were numerous petechiæ. The duodenum contained thick yellowish matter. In the jejunum and ilium was a large quantity of dark matter, which in some parts was mixed with blood, and resembled black currant jelly. The colon contained a quantity of black offensive feces.

The villous coat of the intestines looked natural except in the colon, where it had a deep red colour, not from increased vascularity, but ecchymosis.

The pelvis of the left kidney contained some pus. The bladder was natural. The urine (of which there was about half a pint), had a sediment of thick matter, probably from the left kidney.

The blood in the mesenteric veins was so hard as to give them the feel and appearance of injected vessels. The lungs were of a healthy colour; the left a little hardened, and some yellow lymph was deposited beneath the pleura pulmonalis.

The cavity of the chest, and the pericardium, contained more fluid than natural to them.

On cutting into the lungs, the cells appeared full of a *sero-mucous* fluid, which had given to the left its unnatural solidity.

The heart and vessels were natural.

Plaistow, Essex, April 27, 1813.

X.

Pathological and Practical Observations.

(Continued from p. 180.)

The only remaining view to be taken of digestion, and the formation of blood, respects the opposite condition to that which I have been considering, namely, that wherein nutriment is afforded, and blood prepared beyond what the wants of the system require, or its various secretions and excretions can dispose of.

But, before I enter on this subject, it is necessary to follow the course of circulation, in order to shew the further changes the blood undergoes in its circuit through the body; the means by which it is still further elaborated, and prepared for supplying the various secretions necessary to a state of health; the purposes to which it is ultimately converted by the several secretory organs; and, finally, the excretory outlets by which its effete or redundant matter is discharged from the system.

It has been already observed, that the refluent blood of the body, carried back by the veins, is met, near to its entrance into the heart, by a fresh supply of chyle, which, mixing with it, is conveyed to the right side of the heart, and from thence propelled through the pulmonary arteries, and distributed to every part of the lungs, in which it undergoes those further changes produced in it by the process of respiration, after which, it is again returned by the pulmonary veins to the left side of the heart, to be thence distributed by the arteries to every other part of the body,—when, having served the purposes for which it was so conveyed, it is again taken up by the veins, and carried back to the heart, in the manner already described, there to be again supplied with fresh nutriment, and again to undergo those changes in the pulmonary circulation, which are so essential for animalizing the fresh supply, and fitting it for the purposes of secretion and nutrition.

I shall now glance at the several purposes which it serves, while passing through the circulation of the body.

It is a fact, admitting of no dispute, that every part of the body owes its origin, its increase, and the continued supply which repairs the waste and expenditure continually going forward, to secretion or deposition from the blood. The first speck of life that can be discovered is the embryo heart, and its pulsation the first vital action we can discern. It is, as Harvey has observed, the primum vivens, ultimum moriens; and, if I mistake not, when the mists shall be removed which so frequently obscure the views of medical observers, and when the real operations of nature, and the changes productive of disease, come to be minutely investigated and better understood, it will be found, that, through every period of life, the heart and circulation should maintain the same preeminence. It is true, they are in turn subject to the influence of other organs, whose casual derangement may affect their actions, and produce a state of disease not originating in errors of the circulation. But in diseases spontaneously occurring, or arising from trivial excitements, it will, I apprehend, on due investigation, be pretty uniformly discovered, that the general commotion or local disturbance, as the case may be, was subsequent to and caused by some primary derangement in the sanguiferous system.

I have said that the blood, when returned from the lungs to the heart, is thence transmitted by the arteries to every remaining part of the body. No part endued with life can be considered without the course of circulation, and where the finer ramifications of the arteries are so minute as to be incapable of receiving the coloured or grosser particles of the blood, we find them conveying a clear and colourless lymph, suited, no doubt, to the peculiar secretions they have to perform. The term secretion, as generally understood, applies to the office of certain organs termed glands, which separate from the blood conveyed to them each its appropriate fluid;—thus bile is a secretion of the liver, urine of the kidneys. I know no term, however, so applicable as that of secretion, for expressing the office performed by the extreme terminations of the arteries which convey to each structure of the body its appropriate elements; and although no complicated organ is engaged in performing this office, yet, by the justest analogy, each termination of an artery so employed may be considered as a gland, and the term secretion applied to express the function it performs. Thus are bones, muscles, tendons, nerves, the brain, the heart itself, all secreted by the nutrient vessels of each: Nay, the arteries are again themselves supplied by finer blood-vessels, appropriated to their nutrition, capable of being demonstrated by injection, and not unfrequently the agents in producing disease. Analogy, the most direct, leads us farther to conclude, that these vasa vasorum derive their own nutrition from some similar source; and the contemplation of infinite series, thus presented to the mind, must forcibly impress us with the impracticability of ever tracing nature to her source, and convince us, that on every side human knowledge, and human investigation, are bounded by limits, beyond which our imperfect comprehensions can never pass.

When we take into account the proportion which the parts of the body thus secreted bear to those organs which prepare specific fluids, and estimate the relative capacity of the vessels employed, it must be evident, that the great expenditure of blood is in what may be termed nutrient secretion. The glandular secretions it would be useless here to enumerate or particularize, my purpose being merely to give an outline of the animal economy, preparatory to entering on a consideration of its diseases; most of them are devoted to local purposes, for, wherever a peculiar fluid is required to assist the functions, or facilitate the movements of any part, there some glandular structure is present to provide it. The larger glands, however, seem destined rather for the purposes of excretion; and the various organs by which this is effected come next to be considered. As their office, however, is that of separating from the pure and nutrient blood, those particles which, having performed their part, are no longer serviceable, and of expelling them from the body, the order of nature leads us here to notice that process, and those organs, by which the effete particles are reconveyed into the circulation, preparatory to such expulsion. These are the lymphatics or absorbents, a system of vessels which pervade every part of the body to which blood is conveyed, and whose office is to take up, and carry back to the circulation, all matter that is no longer serving an useful purpose, as soon as it shall be reduced to a state fitted for undergoing their operation; analogous in their structure and general functions to the lacteals formerly noticed, and terminating with them in one common trunk, the thoracic duct, which, as was formerly observed, conveys its contents immediately into the general circulation. From the investigations that have taken place respecting the functions of these vessels, it would appear, that matter deprived of vitality is the proper object of their operation. This may be proved by experiment; for, if gradual pressure is made on a part, capable of compressing and obliterating its nutrient vessels, and thus destroying its vitality, the absorbents of the adjacent parts are immediately employed in taking up and conveying back to the circulation the matter thus deprived of life, and a loss of substance in the part is speedily manifested; and this operation is so certain, that the principle is beneficially applied to the removal of preternatural growth, when its nature and situation admit of pressure being employed with such intent. If the part deprived of life is either too large to be thus removed, or too rapidly destroyed to give time for the slow operation of the absorbents, they then, by acting on the line of junction between the living and dead matter, speedily produce a separation of the latter, as is exemplified in the sloughing of ulcers, and the cure of sphacelus. We are hence, I think, warranted in concluding, that the particles taken up by the absorbents lose their character of vitality before they are thus acted on; and, in contemplating the quantity of dead matter, which, on this principle, the living body must be continually parting with, and have at all times within it, may assign even physical accuracy to the scriptural saying, "that in the midst of life we are in death."

This supposition may seem rather curious than useful, and may even be considered as transcending those boundaries which circumscribe human knowledge, inasmuch as any direct or demonstrative proof of its truth seems hardly attainable. It is a harmless application, however, of what appears to be a general fact with respect to the peculiar action of the absorbents, which fact itself is deserving of every illustration; as a more extended and precise knowledge of the power and functions of this interesting system of vessels, could hardly fail of giving increased perspicuity to our reasonings respecting diseases, and of enlarging our means for removing them. And it is a point on which I apprehend our knowledge is very defective, else we should not so frequently witness the inconsistency of conceiving that the same medicine excited the absorbents to increased actions, while it diminished that of the exhalents,—was at the same time a stimulant and a sedative. Yet, in this way have the effects of remedies in dropsy been not unfrequently accounted for, although the supposition is at variance with all that we know of the moving powers of the body, or the effect of stimulants in exciting these. It was manifestly first suggested by the effect which the same remedies seemed to possess, of not only promoting the absorption of dropsical fluids, but also of arresting the process of effusion; but for the reasons just assigned, such an explanation must be utterly inadmissible. Should we not, therefore, seek for one less contradictory, and, is it not more probable, that remedies which thus promote absorption, do it by reducing the matter to be absorbed to such a state as fits it for the ordinary operation of these vessels, than that they are directly excited to increased actions in the removal thereof. May it not be reasonably conjectured, that all the remedies which prove most serviceable in dropsy, act by reducing arterial action, either by their evacuant or sedative effect, for under one or other of these may every remedy which has acquired any permanent character as antihydropic, be ranged;—thus, mercury and purgatives belong to the former, squill and digitalis to the latter. And thus I would attempt to explain the operation to which the ultimate effect is owing. Dropsy is an effusion of watery fluid, from the extreme arteries of the cavity in which it takes place, whether this be into the larger sacs, or only the cells of the cellular membrane. It must be owing either to an increased impetus of the blood, forced into these vessels, and overcoming their powers of resistance, or else to a relaxed state of the extreme vessels, yielding to the ordinary impetus. From the general appearances of debility indicated by dropsical patients, weakness of the extreme vessels has been very generally deemed the more probable theory of the disease, and but little regard has been paid to the other cause; and yet the increasing experience of medical men, and a fair consideration of the practice most serviceable in dropsy, seems to countenance the belief, that it owes its rise chiefly to a state of plethora, and increased arterial action. On this supposition, which admits of many direct proofs, we can readily understand the effect of purgatives, as they both reduce the plethora, and diminish the arterial action it had excited. Thus, they at the same time remove from the system the matter supplying the watery effusion, and suspend the effort by which the deposition was effected, leaving the absorbents only their ordinary office to perform.

But the effect of remedies acting as sedatives to arterial action, without being directly evacuant, or evacuating by diuresis, requires further explanation. They diminish arterial action, and thus arrest the progress of effusion. But this effect cannot be confined to the trunks or larger branches. It must be conceived as extending to the extreme vessels themselves, to whose diminished energy the disease is so generally attributed. Now, an insight into the operation which thence ensues, may, I think, be obtained by aid of the general fact so lately noticed, relative to absorption; and we may conceive, that the quiescent state of the extreme vessels thus induced by the sedative, places the fluid contained in them in the same condition as if it were extra circuitum, deprives it for the time of the attributes of vitality, and, consequently, renders it fit for the regular operation of absorption. Two principles, therefore, are to be borne in mind, in the treatment of dropsical affections; namely, to reduce arterial action, and diminish that plethora, to which both the arterial action and dropsical effusion are consequent. These views, however, I by no means offer as complete. I consider them only as more consonant with the operation of remedies in dropsy, than those which generally prevail; and I submit them, with all due deference, to the profession at large, to be dealt with as they shall think proper.

I now proceed to complete the view of the animal economy it was my intention to sketch; and am only concerned at having occupied so much time in what many may deem a superfluous undertaking.

We have traced the extraneous matter destined to supply fresh nutriment to the animal frame, from the stomach through the lacteals, into the circulation; thence through the pulmonary circulation; and, finally, into all the extreme arteries of the body, whereby secretions, both nutrient and glandular, are performed. We have seen it again taken up, when no longer conducive to the purposes for which it was deposited, and carried back by the lymphatics into the general circulation. It remains only to shew the provisions of nature for its final expulsion, and to exhibit the organs and processes by which this is effected. Of these the principal unquestionably is the skin, the insensible perspiration of which has been, by apparently accurate experiments, estimated at one half of the whole ingesta. If the amount of sensible perspiration be added thereto, it will place the permanent importance of this excretory in a strong point of view.

The alvine evacuations consist chiefly of course of the undigested parts of the aliments taken into the stomach. The facility, however, with which increased discharges are procured from the innumerable exhalents opening on the surface of the intestines; the frequency with which this outlet is employed by nature, to throw off redundant matter; and the efficacy of purgatives in reducing plethora, and lessening arterial action, are so many direct proofs, that the amount of excretions removed by their agency from the system must be considerable. The next excretion is that of urine, performed by the kidneys; the nature of which has never been misunderstood, as far as regards its excrementitious quality.

Not so that of the bile, and its secreting organ, the liver, the prevailing notions respecting which have been, that both were subservient to digestion, and that the intermixture of bile with the chyme, or pultaceous mass of aliment, transferred from the stomach to the intestines, was necessary, in order to prepare that matter for affording a perfect chyle to the lacteals.

A further use assigned to the bile, is that of stimulating the intestines to their peristaltic motions, by which their contents are propelled; and the inactivity of bowels, which occurs when the flow of bile into them is interrupted, as in jaundice, renders this effect highly probable.

As the nature and functions of this organ are of material importance; as derangements thereof are among the most frequent of human diseases, and are even more frequently than ever found connected and co-existing with other diseases; and especially as I shall have some pathological observations to offer concerning it, such as, I believe, are not generally received, I must be allowed to enter into a somewhat fuller consideration of it than may seem suitable to the tenor of these cursory remarks.

The liver is the largest gland in the body, and has the largest quantity of blood circulating through it. It is supplied not only with arterial or nutrient blood, conveyed by the hepatic arteries, but has also a considerable quantity of venous or refluent blood, carried to it by means of a system of vessels peculiar to it, and which seem destined to bring to it the matter suited for its peculiar secretions. These are the veins of all the abdominal viscera, the kidneys excepted; which, instead of returning their contents to the heart, bring it directly to the liver, where they unite in a common trunk called the vena portarum. This vessel now enters the liver, and ramifies through every part of it. Assuming the office of an artery, it emulates also its structure and functions, and conveys blood destined for secretion, from trunks to branches. Its extreme vessels unite with those of another system of vessels, called biliary, which are the proper secretories of the bile, and which, having separated this fluid from the blood, carry it from branches into trunks, until they finally convey it through their common duct into the intestines, near to the lower orifice of the stomach. The blood of the vena portarum having undergone this process, is again returned by appropriate veins into the general circulation, in the manner formerly explained.

Although the uses already stated have been those generally assigned to the liver, yet doubts have at all times existed on the subject; and it has been argued, that the size of the organ seems disproportionate to such an end; that the blood from which bile is secreted is not such as is supplied to any other gland or secretory; that experiment has shewn, that the bile, as it exudes from the hepatic duct, does not mix with the chyme, but merely diffuses itself over the surface and the coats of the duodenum; that the bitterness of bile seems to have no agreement with the blandness of chyle; and that in jaundice, where its flow into the intestines is completely interrupted, although costiveness supervenes, nutrition does not seem to be suspended. All these arguments may be deemed vague and inconsequential; but the frequency with which they have been urged may serve to shew, that physiologists have not been satisfied with the opinions generally entertained. My own belief is, that the principal office of the liver is, that of serving as an excretory from the system: and, though I am not prepared formally to prove this by an induction from facts or experiments, I shall try to justify my faith, by stating such arguments as an attentive observation of its diseased actions has hitherto furnished me with.

In diseases of plethora, with increased vascular action, purgatives form an essential part of the treatment, and an attentive observer will perceive the alvine evacuations produced at such times to present a morbid character, and in general to be peculiarly dark-coloured, slimy, and fetid. Under active depletion, by blood-letting and purgatives, this state is in general speedily removed, and healthy stools are restored, whose reappearance is oftentimes coincident with and indicative of returning health.

The almost constant occurrence of such state of bowels in the commencement of acute diseases, though unmarked by any evidences of hepatic disease, gradually induced my mind to contemplate this appearance, as connected rather with general plethora than local disease,—as dependant rather on a disordered or redundant state of the material furnishing the secretion, than on a primary disorder of the vessels secreting it. The pertinacity, too, with which a similar state of bowels, in diseases not febrile, has oftentimes resisted the most active purgatives, and every means suited to correcting such morbid secretions, first led me to apply to them also the foregoing reasonings; and induced me, on the faith of their accuracy, to employ blood-letting in aid of purgatives, for the removal of this symptom. And, I can truly assert, that the success attendant on the trial has fully answered my expectations.

The cases were generally such as afforded evidences to me satisfactory of a fulness of blood-vessels existing, although febrile or inflammatory excitement were not present. These evidences I shall by and by have occasion to notice, when treating of the pathology of the circulation.

Connecting these facts with the notions I entertained respecting the excretory office of the liver, my mind was naturally led to contemplate the nature and origin of hepatic diseases in general, and the views I was consequently induced to form respecting them, have proved so satisfactory to my own mind; seem so consistent with the history and progress of symptoms, and the effects of remedies; have afforded so steady a light to guide my own way in the treatment of diseases, and appear so calculated to impart a greater degree of consistency and certainty to medical practice in general, that I should deem myself culpable in withholding them. I offer them, however, with the same diffidence and humility, with which every part of this essay is submitted to the profession; and I demand for them no greater credence, than a fair investigation of their merits may prove them entitled to.

When fulness of habit first arises, from whatever cause it may, many efforts are made by the constitution, to discharge from it what is redundant or superfluous. Increased perspiration seems to be the first and readiest; and, when we consider the amount this excretory is capable of discharging, we must deem it adequate to counteract for a long time the effects of repletion. When from indulgence of appetite, however, nutriment is taken in beyond the wants of the system; or when, from diminished exercise, that which is moderately taken is neither disposed of in the secretions, nor carried off by the excretions for want of that activity of circulation which exercise excites, an excess of blood must arise; and this must become loaded with the effete matter of the system not duly carried away. It is this matter which, according to my opinion, is largely conveyed by the vena portarum to the liver, and is the proper material for the secretion of bile. Blood loaded therewith is the proper stimulus to the secretories of the liver, and its removal the end of their secretion. When furnished in excessive quantity, it proportionally excites the secretories to increased actions, and more copious secretions. If by these the impurities or redundancies of the blood are carried off, the system is relieved, and disease averted.

But if the causes producing this condition of the blood are continued beyond the power of the liver thus to counteract them, to be repeated in four hours, if the first did not operate. Next morning, I found she had taken both the powders, which procured some dark-coloured very fetid stools, but no relief of symptoms. The breathing being much oppressed, and the pulse nearly as before, I took about twenty ounces of blood from the arm; applied a blister to the breast, and repeated the laxative powders.

The blood taken had every healthy appearance. The oppression at the breast was easier to-day, and the pain in the right side and back removed; that in the left side still continued, but not so severe as during the two preceding days. A considerable swelling, about the size of the fist, took place in the left hypochondriac region, and continued about two hours, with considerable increase of pain. The purgative powders had no effect whatever. The headache, giddiness, and nausea still continue, but more distressing at some times than at others. I need not enumerate the daily symptoms. My chief attention was paid to the state of the bowels, which continued obstinately costive, and evidently had a retrograde tendency, from the first time I saw her, indicated from the constant nausea, without any symptoms of the stomach being loaded. I was only able to procure passage in the bowels once in two or three days, although daily using powerful purgative medicines, assisted by clysters. Feculent matter was sometimes thrown up by vomiting, of the same smell and consistence as what passed per anum.

On the 17th December, in the night-time, after having taken some strong doses of calomel, and a large solution of neutral salts, she passed a reptile of the lacerta species. She was pretty easy for two days after this, except the pain in the left side, which continued, and the side occasionally swelled and subsided as before mentioned, and the bowels continuing obstinate. The sickness, giddiness, and headache again recurred, with the retrograde action of the intestines, more serious than before the escape of the animal, also the bringing up of blood from the stomach. Now knowing the cause of the symptoms, I began to be alarmed about the fate of my patient. Although there were no symptoms of serious inflammation, I was apprehensive of intus-susception, or that there might yet be another animal, keeping up the inordinate action of the bowels. I increased and varied my purgative medicine, aided by injections; still the feculent matter was more frequently passed through the stomach than per anum.

The 27th December, the sickness and giddiness, and oppression of the breast, having been very distressing, a stupor and trismus took place, so much so, that she did not speak or open her eyes or mouth for the day; neither could I move the jaw by force. I applied a large blister to the breast, and after it had risen well, she awaked as from a sleep, without any other ailment but some pain in the side, and debility. She had passage in the bowels next day, without a laxative, for the first time since she was taken ill, and required no farther medicine.

I was vexed, and much disappointed, at not being able to procure the animal alive or dead; for although I can have no doubt of the fact myself, yet neither my testimony, nor that of the people themselves, will be sufficient to satisfy the incredulity of others. I, however, made such inquiries, that there could be no deception. When at stool, she had unusual pain in the rectum, and afterwards she thought she perceived something moving in the pot. After examining with a stick, it leaped out with a bound, and ran very nimbly under the drawers, which put both her and her mother, who was in bed in the room, into great fright and consternation. This they saw by the light of the fire. She next lighted a candle, and, in looking under the drawers, was still more frightened, when she saw the animal with staring clear eyes. By the intreaties of her mother, who was not able to get out of bed herself, and was afraid it should do mischief, she laid hold of it when it turned round, and put it in the fire, and held it down with the poker till it was consumed. It squeaked with a shrill noise, and attempted to get out when first put in the fire.

The size of the animal, as she described it by comparison with her finger, was between four and five inches long, and considerably thicker then the finger; it had a bluff nose, like the end of the finger, with a considerable mouth and bright staring eyes; the back, of a mahogany colour, with a number of small white bright spots; had four feet with claws, not very long, and a short thick flattened tail, about an inch long. Did not take notice of the belly.

I have, in a collection of reptiles, one, a native of this country, that agrees with the description of the above, all but the colour. The difference of the colour might be caused by the difference of the situation they were used to.

Since her recovery, she recollects, when on a message about five miles in the country last autumn, of having drank at a rivulet, where she saw several such animals as that which came from her, but not of the same colour; therefore, supposing the animal to have been swallowed then, which was some time in August, it must have been between three and four months in her bowels.

Since this circumstance, I have heard of a man of this place, who not long ago, being intoxicated, and returning home in the night, took a large draught at a spring, became very sick, and vomited much in the morning, which he imputed to the quantity of spirits he had drank, until he vomited an animal of the lacerta class, what is usually called an aske in this country, alive, and of the full size; which must have been swallowed when he was in that state of insensibility, although he did not recollect any thing but having taken a large draught at the spring.

I find amongst my notes a case which occurred with me when off Cadiz, in 1808. A seaman complained of spitting of blood, which he had observed for some days. Not finding any symptoms of derangement of the system, I suspected that the blood must come from the throat or back part of the nose. On examining, I discovered something black well down in the throat, which felt soft, with the end of my finger. I laid hold of it with a pair of dressing forceps, and brought out a full-sized leech, which cured him of his complaint. I kept the leech, and used it afterwards. It must have been upwards of two months from the time he swallowed the leech. About that time he belonged to the boat that was watering at St Mary's, and was in the habit of drinking at the tank, which contained leeches; and, for about a month previous to the leech being taken from his throat, he had been using mercury to a considerable extent.

I have frequently got leeches from the mouths of bullocks when they were killed on board ship; they were generally found under the tongue.

Dunfermline, 15*th January* 1813.

XII.

An Account of some Cases of Puerperal Fever, with their Treatment.

By Thomas Sutton, M. D. of the Royal College of Physicians, London.

Some authors of high reputation differ considerably respecting the sort of local affection, and also in regard to the evident symptoms, which they judge to be necessary to constitute puerperal fever. While Mr Burns wishes to rank it as a disorder distinct from inflammation of the uterus, and from peritonitis, and considers it as constituted more particularly by peritoneal and omental inflammation combined, Dr Denman is of opinion that any of these inflammations happening in the puerperal state, either alone, or combined, and with fever, may properly enough be judged to be the disease under consideration; and that the range of symptoms, with any of these local inflammations, with fever in lying-in women, though differing in intensity, and affecting the frame more or less generally, ought to be judged, not to constitute an actually different disease, but only to point out its existence in different degrees. With the latter authority, there would be no difficulty in considering the disease to be afterwards particularly noticed, as puerperal fever. On the treatment of puerperal fever opinions also vary considerably, but there is a tolerably general consent among practitioners in this particular, that it is a very dangerous and fatal disorder, under every plan of treatment that has hitherto been adopted. On the latter account, in my tract on Peritonitis (Vide Tracts on Delirium Tremens, Peritonitis, &c. published by Underwood, London,) I ventured to intimate, that a trial of local cold in a fluid form applied over the parts from which the pain arose, might prove advantageous in promoting the cure of this disorder, as this remedy had been found to be very successful in peritonitis, a disease very nearly allied to puerperal fever. This intimation I did not accompany with any examples in the publication alluded to; but it was my intention, when any cases of the kind might occur within my observation and knowledge, in which this treatment had been adopted, to give an account of the result. I am therefore unwilling to pass by the cases mentioned below in silence, though the disease certainly varied from the ordinary form of puerperal fever, and may be supposed to be modified to some extent by the great violence of attack on the bowels. Yet the local affection and the disease happening in the puerperal state might lead to a conclusion that it ought to be considered as a species of that disorder, which is further supported by the suspicion of its arising from contagion, as may be inferred from its occurrence in many cases within a short space of time, at Woolwich. There does not appear to me any propriety in considering this disease to be intestinal fever, as described by Mr Burns; but whatever it may be judged to be, the comparative success of the means of relief which were employed, may be of some advantage to be known.

About a year ago I saw three cases of the same kind (within a fortnight's time, with Mr Coley, surgeon of Deptford,) as those which afterwards occurred at Woolwich. One of these died on the third day, in another the disease ended fatally on the 12th day, and the third recovered from a state of debility and weakness which is seldom overcome.

About two months ago, I was sent for by Mr Butler, surgeon of Woolwich, to visit a patient under circumstances of disease in which he had lately attended three, who had all died. They had all gone through easy labours, and the first days of their confinement had been passed very satisfactorily; but on some uneasinesses in the abdomen occurring, they had taken castor oil in a moderate dose, which was followed by the most violent diarrhœa. The patient I was called to visit had been confined six days, and this was the second day of the attack of the present illness. She had a very quick and weak pulse; she was very pallid and exhausted from the diarrhœa she had undergone; and while I was with her she had two violent attacks of pain in the flanks, so great as to occasion considerable moaning, and expressions of severe suffering. The belly was not particularly tense, but tender on pressure; there was a dry febrile heat, the tongue was coated, the milk quite gone, and the lochia had ceased, with the exception of a trifling watery discharge. The treatment that had been adopted in this and the previous cases, was an endeavour to mitigate the symptoms of diarrhœa and pain, to moderate the fever, and to support the patient, which had not been attended with success; and, as there was a degree of local pain which indicated the presence of inflammation, the state of the patient, and the events that had lately taken place, occasioned me to desire a trial of cold to the parts attacked with pain, in the manner I had employed it for the cure of peritonitis. The other remedies prescribed were moderately astringent medicines, with opium in such quantities as the pains appeared to require; and it was agreed, if necessary, to open the bowels by clysters, and by the mildest purgatives. An interval happened before I saw Mr Butler again; during which the work alluded to was published, when I was happy to hear that the patient, whose case I have just mentioned, was very soon relieved by the use of the cold lotion, and she afterwards used it intermittingly for ten days, and, on discontinuing it entirely, some uneasiness of the abdomen again occurred, when she, of her own accord, sent for the same remedy, by which she was speedily relieved. Mr Butler likewise stated to me, that he had afterwards six similar cases, whom he treated in the same way, and five of them recovered. He also remarked, that the party, who was the subject of the unfortunate case, would not submit to the assiduous application of the lotion, and sunk on the third day. We may therefore conclude, that the comparison of success, with and without the lotion, is highly favourable to that remedy, whether we include or deduct the last unfortunate case. Mr Butler also observed to me, that of nineteen other lying-in women, that he attended during the period the ten cases above mentioned occurred, not one of them was without diarrhœa, which he was led to consider to be a mild form of the severe disease above noticed. The same disease likewise occurred to the other practitioners in the place.

Mr Butler stated, that there was no ground for attributing any of the violence of the disease in the ten cases, to any thing that might happen during the labours, as the greater part of them had very easy times, and passed the first days after confinement very satisfactorily. The disease commenced in one only, so early as the third day of confinement; in the patient I was called to see, it began on the fifth, in another on the sixth. The pains which the patients complained of did not occupy uniformly the anterior parts of the abdomen and pelvis, but were also felt severely in the flanks and loins. There was always some tension of the abdomen, and tenderness on pressing upon it. Pain in the head was never complained of, nor did delirium occur in any of Mr Butler's cases. The pulse was always very rapid, but never full, and on this account, though Mr Butler has a good opinion of blood-letting, in the early stage of puerperal fever, he never entertained the idea of using the lancet in any of these cases. The tongue in the fatal cases, in the last stage, was brown and dry. The milk went away completely in all these cases, and never returned, and the lochia suffered interruption. Vomiting happened only in one case, and to no great extent, and the disease never commenced in any with coldness and rigors, but some complained of these sensations on the subsequent days. Those who survived recovered very slowly.

The inflammation in this disease must, without doubt, have been very extensive, as the pains accompanying it occupied, at times, nearly the whole abdominal cavity. The success of the cold lotion was in these cases apparent, which must become a strong inducement to its use in similar instances, and in the less doubtful and acknowledged forms of puerperal fever.

Greenwich, May 15, 1813.

XIII.

Case of Scirrhus in the Intestines, arising from Hairs remaining in the Canal. By WILLIAM GEORGE BURRELL, M. D. Assistant-Surgeon 79th Regiment.

LAURENCE HARDING, ætatis 35, private soldier in the 2d battalion 79th regiment, was admitted into the Regimental Hospital on the 18th April 1812, with constipation of the bowels. This man had been affected with dyspeptic symptoms and pain in his abdomen for several years, which pain was aggravated by taking solid food.

Previous to his admission into the hospital, he had not any passage downwards for six days. He immediately had an emollient glyster, and fifteen grains of extract of colocynthida, which was repeated every two hours. From the glyster he experienced little relief, but, in the course of the evening of the 19th instant, he had five or six very copious stools, of a very dark colour, and extremely fetid. After this his bowels continued tolerably regular, but there was always a disposition to costiveness, which was removed by castor oil. When constipation existed any time, all the symptoms of nausea and vomiting of the ingesta were considerably aggravated, and those complaints were invariably relieved, when passage was procured by aperients.

His appetite was impaired, and from constant irritation, produced by the very irregular state of his bowels, his strength gradually sunk, and his body wasted considerably.

His stools never were perfectly natural; they were mostly clay-coloured, at other times of a sanious appearance, and very fetid. Scybala were occasionally passed. As much debility was present, port wine, sago, and beef-tea were given. Any remedy only gave him transitory relief, and he expired on the 20th May 1812.

Dissection of the Body.

On laying open the abdomen, the stomach was found much thickened throughout its whole substance, and the pylorus very much contracted, which contraction continued down the duodenum. Through all the intestines this thickening and gristly appearance was apparent. The colon was prodigiously enlarged in its calibre until where it forms its sigmoid flexion. At that point there were three distinct holes ulcerated through the coats of the intestines, and forming a communication with the abdominal cavity.

Beyond the sigmoid flexion the intestine was contracted in its diameter, so as hardly to admit the little finger to pass downwards.

On cutting open the pylorus and small intestines, the internal coats were found to be covered with a soft substance, which resembled size. The internal coats of the colon were of a dark colour, and in general were ulcerated completely, and were hanging in shreds. The colour of the colon was of a dark lurid red. At the sigmoid flexure there was much contraction, and the thickening was so great on one side, and the valve found so considerable, as hardly to admit a common bougie through it.

The portion forming the sigmoid flexure was cut out; and, on laying it open, and removing some hardened portions of feces, five or six hog's bristles were seen distinctly crossing each other in different directions, and were partially invested in the villous coat, which had grown over them, and had retained them in the different positions in which they were placed; and so firmly were they kept down by those partial coverings, that it required some force to draw them out. The mesenteric glands were of a cartilaginous appearance; the liver was suffused with blood, and the gall-bladder full of bile.

The spleen was very small, and compressed into an oblong shape, probably arising from the pressure of the colon when distended with feculent matter.

This man had formerly been a shoemaker. There was no certainty at what period of time he swallowed those hairs; but from the derangement which always existed in his bowels, and the pain referred to the situation of the sigmoid flexure, little doubt can be entertained, but that these hairs were the cause of all his complaints, and ultimately of his death.

XIV.

Account of the Second Watch of the Reputed Fasting-Woman.

Communicated by Mr Benjamin Granger, Surgeon.

A second watch having taken place on Ann Moore, which has led to the detection of her impostures, I feel it incumbent on me to send the intelligence to your Journal. It may not be immaterial to observe, that Ann Moore remained under watch until the *tenth day*, and that during this period of time, she did not take a particle of sustenance, liquid or solid, with the trifling exception of some vinegar and water on the ninth day. As to the effects produced by such protracted abstinence, I shall only make a few observations. A Merlin's weighing-machine being attached to the bed on which she lay, it was found that she had lost many ounces in weight on the 10th day. The debility at the same time was so extreme as to occasion syncope. In the state of syncope, the pulse, which on the 9th day beat 140 in a minute, being indistinct, a consultation of several gentlemen of the Faculty was obtained, and the opinion they gave was, that Ann Moore was moribund. During the confusion excited by this report, the daughter was admitted into the apartment, and it is suspected, that she instantly gave her mother some article of sustenance. Be this as it may, the daughter had not been many minutes present, before Ann Moore was *strong enough to get up in bed and wash herself**! The watch, however, broke up. On the following morning I saw Ann Moore; her pulse was then 98, and in a day or two she enjoyed her usual health.

Vestiges of urine being discovered on the linen and bedding, Ann Moore was induced to make a confession of the imposture, before Thomas Lister, Esquire, one of his Majesty's Justices of Peace for the county of Stafford. The amount of the confession was, that her only sustenance was tea, without either milk or sugar. The daughter, however, was brought to confess, that her mother had no dislike to sugar, and that she sometimes gave her mother tea with sugar in it. Add to this, Ann Moore has been induced to swallow two mouthfuls of milk, which she did in the presence of Dr Fox, Mr Wright of Derby, and myself. Such is the result of the second watch on Ann Moore, instituted by the Reverend Legh Richmond,—a watch which, according to the resolutions of a committee, was to have been kept up an entire month, and which, already, had to boast of the services of *three* magistrates, *four* physicians, *eight and twenty surgeons*, and upwards of *fifteen* clergymen of the Church of England.

As it was a matter of experiment, whether Ann Moore had or had not lived six years without food, we may safely infer, that our knowledge of the laws of organic life is too imperfect, to permit us to determine by reasoning *a priori* how long abstinence from food can be endured without being destructive to life. Thus Dr Henderson, in his examination of the imposture of Ann Moore, did not even attempt to draw his conclusions from principles of science. He did, indeed, allude to the experiments of Lavoisier and Seguin, which determine the amount of cutaneous and pulmonary excretion. As a proof, however, what little stress he laid on the argument afforded by these experiments, he says, that the quantity of "*hydrocarbon* disengaged from the lungs in twenty-four hours, is 12.23 ounces †." Yet the experiments of later chemists have established, that such a substance as *hydrocarbon*, is never disengaged from the lungs, and consequently that the water of respiration is not produced by the union of the oxygen of the atmosphere with the hydrogen of the blood, according to the theory of Lavoisier and Seguin. Neither did Dr Henderson mention the curious subject of absorption from the air by the lungs or skin; and yet that such absorption does take place is supported by large induction; and the fact must necessarily vary the conclusion drawn from the experiments of Lavoisier and Seguin, as to the loss of weight the body sustains by pulmonary and cutaneous excretion. "Dr Currie has proved, by the case of W. M., that the egesta exceeded the ingesta in a proportion much greater than the waste of the body would explain. But the case of Barrat, published by Dr Bardsley, is still more curious; for, during the period in which the register clearly pointed out almost a regular daily excess in the amount of the urine, compared with that of the liquids and solids taken, the patient, notwithstanding, had gained an accession of weight of *seventeen pounds*; a phenomenon observed by Dr Bardsley in two other cases, though in a less degree *."

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* It is now admitted that the illness, in a great degree, was simulated, for the purpose of exciting alarm. There had not been *delirium*, which is always a precursory symptom of death from abstinence.

† Examination of the Imposture, &c. page 10.

As to the necessity of investigating the disease in question, the account of Janet Macleod's abstinence was a proof. No apparent motive of imposture existed. The case is recorded in the Philosophical Transactions; is admitted among the articles selected in the abridgement of the Philosophical Transactions; and is represented by Dr Thompson of Edinburgh, to be "well authenticated" at this very day †. "In the Transactions, he says, are to be found two examples of long abstinence; both the persons were natives of the Highlands, and both the cases are very well authenticated." Now John Ferguson is the subject of one of these examples, and Janet Macleod of the other. Dr Henderson, however, did not think it proper to mention the case of Janet Macleod; probably because his arguments against the *testimony* of Ann Moore have no force when applied to the case of Janet Macleod. For a similar reason, perhaps, Dr Henderson omitted to mention the name of *Mary Thomas*, although an account of her extraordinary abstinence was published by the editor of the Medical and Physical Journal, Mr Royston. "She is now, says Mr Royston, of the age of 84 years; 63 of these she has been confined to her bed; and, during this long period, has lived nearly without eating or drinking. For, *ten years*, about the middle of this long term, she was supported absolutely without food of any kind; then lying in a torpid state, unconscious of her existence. In 1807, her *ingestæ* were confined to one ounce of bread and a glass of water in fourteen days, and this she invariably rejected from her stomach in a few minutes after taking it*."

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* Edinburgh Surgical Journal, Vol. IV. page 101.

† History of the Royal Society from its first Institution, &c By T. Thompson, M. D. F. R. S.

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XV.

Observations on Brain-Fever. By SAMUEL BURTON PEARSON, M. D. Lazonby, Cumberland†. [illegible] 1801.

Μεγα βιβλιον, μεγα κακον.

BRAIN-FEVER. At the earnest solicitation of several people who have been afflicted with this grievous malady, I offer this small treatise to the public. Multifarious and repugnant theories on the science of life still continue to agitate the medical world. Galen's writings, after the extinction of literature for several ages, were again revived, and produced innumerable controversies:—The acrimonious opposition of the Galenists and Arabians, and the complete everthrow of the latter, are well known to every reader. The chemists attacked the Galenists with fury, and they sustained a defeat. Different sects have originated from Stahl, Hoffman, Boerhaave, Cullen, and Brown. A medical review will convince any one how the faculty worry each other at the present day, about their different dogmas, with much injury to themselves and patients. For the above reasons I disavow all theory, and briefly state the circumstances as they occurred to me at the patient's bed-side. Out of 93 cases that have been treated by the principles here adopted, not one has fallen a victim to the disorder; but, when a contrary mode has been

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[*] Medical and Physical Journal, Vol. XXI. page 97.

[†] *Note by the Editor.*—The first part of this communication consists of the small pamphlet, to which Dr Armstrong referred as the first publication on this subject, (Ed. Med. Journal, Vol. IX. p. 58.) and which we reprint with much satisfaction, both on account of its great importance, and its very limited circulation.

been attempted, few have recovered, and those only whose constitutions were sufficiently vigorous to resist its ravages.

I have called it Brain-Fever, because it is universally known in Newcastle and its vicinity by that term. The same observation extends to putrid fever.

Cause.—Frequent and excessive intoxication.

Description.—It is preceded by tremors of the hands; restlessness; irregularity of thought; deficiency of memory; anxiety to be in company; dreadful nocturnal dreams, when the quantity of liquor through the day has been insufficient; much diminution of appetite, especially an aversion to animal food; violent vomiting in the morning; and excessive perspiration from trivial causes. The above symptoms increase; the pulse becomes small and rapid, the skin hot and dry; but soon a clammy sweat bedews the whole surface of the body; confusion of thought arises to such a height, that objects are seen of the most hideous forms, and in positions that it is physically impossible they can be situated; the patient generally sees flies or other insects, or pieces of money, which he anxiously desires to possess; and often occupies much time in conversations of negotiation, if he be a commercial man. Often, for many days and nights, he will continue without rest, notwithstanding every effort is made on the part of the physician to appease his mind, by variety of conversation, and variety of stimuli. He frequently jumps suddenly out of bed in pursuit of a phantom, and holds the most ineffable contempt for the practitioner, if he do not concur in his proceedings. He commonly retains the most pertinacious opinion that he is not in his own house, and that some of his dearest relations have sustained a serious injury. During the concourse of these symptoms, he often can answer medical questions properly for a short space of time, and then relapses into the raving state.

Distinction.—It is distinguished from putrid fever, in never being contagious, or having purple spots; or ever having a cadaverous smell; or ever being received from human effluvia; and in the delirium being much more impetuous. It is distinguished from inflammation of the brain and its membranes, by not having so vehement a fever; or redness and turgescence of the eye and face; or impatience of light or noise; or hard pulse; and by opposite causes, and opposite method of cure.

Method of cure.—A full dose of opium should be immediately administered in a glass of wine, and repeated in smaller doses for several hours successively; the quantity of which should be regulated by the constitution of the patient, habit of intoxication, degree of the disease, and other concomitant circumstances. The patient, if he eagerly request it, may be allowed to walk from room to room, and the most consoling language should be used by his attendants:—The debility of the system should be resisted by sherry gruel, cold wine, and porter and soup; which may be given in sufficient quantity, as the stomach, in this complaint, is very tenacious of what it receives. I never saw the bark, blistering, or affusion of cold water on the head, of any use. Every unnecessary restraint should be carefully avoided; therefore the strait-jacket, which is so universally employed, is the most injurious remedy that can be applied; for, by the perpetual efforts the patient uses to rid himself from confinement, he excites profuse sweating, debilitates the muscular fibre, and soon exhausts the vital principle. If the above mode of treatment be successful, or at least affords the unhappy sufferer a chance of recovery; the impoverishing the system by bleeding, strait-jacket, or abstinence from invigorating remedies and diet, must be extremely mischievous.

Newcastle upon Tyne, July 1801.

Additional Remarks.

Some time since, I enclosed my pamphlet, with additional remarks, corroborating the success of the practice, to Mr Abernethy, the celebrated surgeon in London, and received from him the subsequent observations: "I can merely conclude, that the treatment of the disorder, denominated brain-fever in your part of the country, by you, who have studied human nature, appears so consistent with reason and the doctrines of physiology, as to leave no room to doubt about the success which you commemorate." At my last visit to Newcastle, about six years ago, Mr Maxwell, at present practising there as a surgeon, solicited my medical aid in an untoward case of brain-fever, at the Bird and Bush Inn, Pilgrim Street. The waiter's name was Andrew. Mr M. probably will recollect my observation at our consultation, that, notwithstanding the violent impetuosity of Andrew, I had little hesitation in saying, if my opinions were rigidly adhered to, Andrew would be on the street, convalescent, in three days. Such was the confidence I had then acquired from long experience, in attending this formidable complaint. The result was even sooner than I prognosticated. To insure success, and remove Mr Maxwell's despondency in so desperate a case, I passed the night in the room with the patient, attended to the direction of the phantoms, administered his opium, allowed him porter frequently, procured sleep, in which he remained, with little interruption, 18 hours, and he perspired profusely all the time, and awoke

woke with his intellects perfectly entire, but harassed with much debility.

Mr Maxwell, after the successful termination of the case, observed, that he alone had cured 40 patients by the principles of my pamphlet; and he considered the public and faculty much indebted to me. In confirmation of the success of my practice, in several cases of brain-fever, Mr Surgeon, practitioner of surgery now in Newcastle, whose extensive knowledge on this subject needs no comment from me, bears ample attestation. It is impossible to describe the sounds, whims, and fears that occasionally distress the patient in this disease. I never yet saw a case with complacency of mind. A patient last year, notwithstanding he had taken 300 drops of laudanum, at time and time, could not be composed until he was allowed to go 15 miles, to reconcile his feelings of the innocence of a murder, which had been committed upwards of 20 years ago. The phantoms, he said, informed him that he was the perpetrator of the horrid deed, and they had received that intelligence at the grave of the deceased, by direct oral communication. The pleading of his well known innocence incessantly kept up the irregular excitement of his mind, and I am well convinced that, if even an ounce of laudanum had been given at a dose, under these strong exciting circumstances, it would have considerably aggravated, instead of alleviated his disorder; on the same grounds, that a bottle of brandy would not intoxicate a criminal led out to execution. As soon as he arrived at the place, and was convinced of his erroneous impressions, he slept three hours, was much tranquillized, and passed a comfortable sleeping night, with camphorated julep at times, and returned home next day perfectly intellectual, but weak. As the pulsations of the arteries in the ears in brain-fever are sometimes very excessive, so all sounds, under such occurrences, cause an association of ideas of immoderate intensity, and *invariably* of a hostile nature, as reports of fire-arms; therefore we never need be surprised at any communications of this description from the patient. As the brain-fever is never marked with the wild, glassy, furious eye of the maniac, but constantly with much inexpressible anxiety of countenance, converting almost every object into terror, and *never originating* from any other cause than exorbitant ebriety, and yielding generally to a long, profound sleep, with excessive perspirations, I am induced to think that its cure may be undertaken with as fair a prospect of success, as other diseases of almost daily occurrence, if the practitioner be called in time, before the system is too much exhausted, and administer, as directed, opium, stimuli, and consoling language. On the contrary, if venesection, evacuations, rigid confinement, be employed by the practitioner, I can state, from much experience, that the odds against the patient's existence, let him be ever so robust, are at least twenty to one. This last observation, I hope, with practitioners in future, will be impressive. The disease is of more consequence than many are aware of, for some thousands have lost their lives in it, purely from mismanagement. The lower class of inhabitants in Newcastle being much addicted to excess of ardent spirits, consequently very liable to brain-fever, afforded me, during my residence there, an ample field for experimental observation. It would be irksome here to give details of cases at Newcastle, during my practice there as a physician, and more especially as many of them are well known to my ingenious and esteemed friend, Mr Surgeon. About 16 years ago, I attended Mr George Frost, at present a publican at Newcastle; and, as Frost is a man of veracity, the curious reader may be informed from himself of the success of the practice.

Frost asserted, during his illness, that he saw a cow standing on the floor on one leg, on a chew of tobacco; I negatived the idea, and I soon perceived the increased fury of his eye, and general disturbance. From this case, I learned the indispensable necessity of never rudely contradicting the patient, but always of using "consoling language." Frost's case lasted three days and three nights, and I never left his house all the time. Mr John Hopper, cooper, now in existence at Newcastle, near the same time was afflicted with brain-fever, and I attended him a whole week. The same method of treatment was pursued.

In the treatment of brain-fever, the principal indications of cure the practitioner should have in view, are, to attain complete ascendency over the patient's mind, and to procure sleep with the utmost attention. In many cases these are difficult to accomplish. Whatever topic antecedently engaged the patient's attention, should be carefully introduced, and invariably represented in a favourable light. For example, if he be a merchant, and have sustained disasters by sea or any speculations, which may have caused the complaint here described, by excess of liquor, the disagreeable impressions of mind should be immediately counterpoised, by informing him of an advantageous ticket in the lottery, put in, unknown to him, by one of the family or his friends. The stimulus of the news should not be too excessive, but merely to guarantee his other losses, and the money from the prize should be only forthcoming in a few days. Subjects of enterprize and negotiation should be shifted as expediency directs. If after the patient has been led from room to room, and convinced by some familiar object, that he is still in his own house, it be found that he continues refractory in taking regularly his medicines (for he often has an extreme aversion to every cup of a medicinal aspect), and that you cannot have absolute dominion over his mind, the present process of treatment must be instantly relinquished, and some dreadful catastrophe, as a turbulent revolution in the nation, must be represented, in which he is to be stated as a *suspicious* accomplice, in directing the various movements of such a commotion. He must now be confined in the largest room of the house, with at least five or six attendants, who, when weary, must be succeeded by others, under the same restrictions. The patient now, and each of the guards, must have straps of leather, representing criminals fetters, round the legs, and a sentinel, with strict authority, should be placed at the door, which must be guarded by a real, never a fictitious chain, to occasionally cause a noise to excite the peculiar attention of the patient. The discourse of the attendants should now turn upon the nature of the revolution, and every suspicious criminality of the patient should be gradually wiped away by the successful probation of an *alibi*. The sentinel should observe, from the express magisterial mandates, which should be even read from a paper, that his authority over the unhappy man's confinement, only extended to a certain hour in the ensuing day, and that he would be exonerated from his stigma by an acquittal, after undergoing the usual and legitimate forms of jurisprudence. Circumstanced in this manner, porter should be earnestly solicited to drink by the attendants, who should only meet with compliance from the sentinel, through the intercession of the patient.

The patient should be placed in an easy chair, or allowed to walk about the room, but never, at first, in a horizontal position, for reasons too obvious for present discussion; and particular care should be taken to remove every table out of the room, or any furniture that could excite any alarm of shade or concealment, as the patient's attention is incessantly roused into action, in peeping under obscure places to detect the egress and ingress of phantoms. When phantoms, or optical allusions, appear, they should never be represented by the assistants as having no existence, as that implies contradiction, and thus induces an unpleasant argumentative process of reasoning in the mind of the patient, which defeats for a time the practitioner's intention; but, on the contrary, the attendants should acquiesce with his sentiments, and immediately strike with a cudgel at the place engaging his attention, and, by thus apparently dispersing them, the patient will gradually acquire the consoling idea of their hostile impotency, and will felicitate himself with permanent security from the strenuous exertions of his confidential fellow-prisoners.

sioners. The last observation has often a wonderful tendency to diminish the irregular mental excitement. Porter should now be introduced by stealth by the sentinel, and a toast, according with the patient's previous sentiments, being ready, a gill of the beverage, with forty drops of good tinctura opii in it, should be given to the patient, who must be caused to swallow it as a bumper. The porter should pass round, and the patient, in his turn, should participate in the gratification. The political conversation and dispersion of the phantoms should continue, and, at the expiration of an hour, fifteen or twenty more drops of tinctura opii should be administered under similar circumstances, constantly giving the patient the precedency. In this manner you should proceed for six or seven hours successively. If yawning, lassitude, or the least propensity to sleep be observed, the patient's chair should be removed near a bed, previously prepared, the consoling revolutionary language should sink into whispers, and he should be laid down with a confidential friend. If he now fall into a profound sleep, he always perspires abundantly, and often continues thus for twelve, fourteen, or even eighteen hours, and then awakes perfectly collected. If he awake in three hours or so after first lying down, alarm is generally upon him, which must be counteracted by a full dose of opium and wine, or porter. Every time he awakes to perform any evacuation, he must have a large draught of warm sherry gruel. Larger doses of opium, I have always found inimical, if they do not succeed at their first operation; they add much to intellectual confusion, and are fraught with danger. After the termination of six or seven hours, by administering opium in the way specified, if the doses do not succeed in procuring repose, I omit them for the space of four or five hours, and have recourse to them again in somewhat larger doses, with the same injunctions as described above. In a late case, the patient went through three successive trials before the desired purpose could be effected, which at last completely answered my expectations. In another recent instance, where six attendants constantly were employed in sitting on a chest-lid, to keep it down to prevent the outlet of the phantoms, five grains of camphor, and a grain and a half of opium were given in wine, and the same quantity of camphor with one of opium were exhibited every hour, for five successive hours, with perfect success. If an attendant removed from his situation, excessive alarm instantaneously seized the patient. This, I apprehend, is a seasonable innuendo for other practitioners. Language and stimuli must be employed according to the conceptions of the practitioner.

Lazonby, Cumberland, April 1813.

XVI.

XVI.

A Mode of Preventing the Shortening of the Limb, in conducting the Cure of the Broken Femur. By M. H. B.

The principal difficulty in setting the broken femur, is to place it in such a position, that, during the period necessary for union, the contraction of the limb, so usual in these cases, may be prevented.

This may possibly be done by placing the thigh and leg over a machine somewhat similar to that proposed by Mr C. Bell; in such a manner, however, that the breech may not reach completely to the bed, but have its weight supported by the upper part of the leg laid over the farther inclined plane. In this manner, the constant tendency of the breech to descend, will operate in keeping a certain degree of extending force constantly applied to the thigh, which may, by this means, be prevented from contracting, and so giving rise to a shortening the limb.

PART II.

CRITICAL ANALYSIS.

I.

Observations on the Nature and Cure of Dropsies, and particularly on the presence of the coagulable part of the Blood in dropsical Urine: to which is added an Appendix, containing several cases of Angina Pectoris, with Dissections, &c. By JOHN BLACKALL, M. D. Physician to the Devon and Exeter Hospital, and to the Lunatic Asylum, near Exeter. 8vo. pp. 410. Longman and Co. London. 1813.

A treatise on dropsy is not calculated to excite much expectation or interest at first sight, and we acknowledge that we took up this volume with some degree of reluctance. Considering how much had been written upon the same topic, and how scanty the information that had been communicated; how numerous the remedies which had been recommended, and how few the instances of cure that we had witnessed, or could expect to witness, since the dropsical effusion is generally a symptom of some serious derangement of the health, rather than itself a disease; we sat down to the persual with no anticipations of interest or information to be derived from the task. But we were speedily undeceived; having found the author to be possessed, not only of that zeal for professional inquiry, which leads to a steady and unwearied collection of facts, but also of much originality of observation, and of a mind apparently unwarped by any system, and open to the reception of truth, from whatever quarter it may come. We have not, in fact, lately had occasion to examine a work, which exhibited so much of the true philosophic spirit in the investigation of disease, as this volume evinces; and have risen from the perusal with some new views of the pathology of these diseases, and with more clear conceptions

tions of the indications to be pursued in their treatment. We shall endeavour to give an analysis of the contents of this treatise; but, from the copious details with which it abounds, our statements will be necessarily very imperfect.

The best practitioners have acknowledged the extreme uncertainty of all the remedies usually prescribed for the cure of dropsies, and their ignorance of the circumstances under which these succeed and fail respectively; and this uncertainty, Dr Blackall remarks, can only be imputed to "an obscurity in the disease," or, in other words, to the confounding of different morbid conditions of the body under the same name. The older physicians, he observes, actually made some distinctions in respect to these conditions, in their *leucophlegmatia*, *cachexia*, &c.; but these have fallen into neglect, in consequence of the fanciful humoral hypotheses with which they were connected: nevertheless many of their practical remarks, which Dr Blackall has quoted in the course of his work, are well founded, and evince a considerable knowledge of the nature and tendency of these diseases. A more solid basis of observation, in regard to the varieties of dropsical affections, may be laid, he thinks, in an accurate investigation of the qualities of the urine; and the object of this volume is to point out one particular character of that excretion, which occurs in many cases of dropsy, in various degrees, and to detail the result of his observation respecting it, in a long series of cases. The circumstance alluded to is, that, on the application of heat, considerably under the boiling point, as 160°, "in a considerable number of dropsical cases, the urine *coagulated like diluted serum of the blood.*"

This fact, indeed, had been noticed by several writers, especially by Cotunnius, Fordyce, Darwin, Cruikshank, and others; but little practical observation had been deduced from it. Mr Cruikshank affirmed, that, "in the general dropsy, the urine coagulates like diluted serum of the blood; whilst, in that which proceeds from unsound viscera, it is usually high-coloured and scanty, deposits on cooling a pink-coloured sediment, and does not coagulate either by heat or the nitrous acid." This doctrine, however, Dr Blackall contends, is not strictly correct.

> "The former of these appearances is certainly often connected with visceral obstructions; the latter are sometimes, I believe, independent of any such taint; and there are other states of that secretion, in which it is neither loaded with serum, nor scanty, high-coloured, and full of sediment, but occasionally, and in some particulars at least, runs towards the contrary extreme.
>
> "These different conditions of the urinary discharge," he adds, "seem to indicate a corresponding difference in the constitutional affection

affection to which they belong; and I entertain hopes, that hereafter, and under a more accumulated experience, they may be found important guides in practice." p. 2.

The author, then, proceeds to his detail of cases, which he has arranged in the following manner. In the first four chapters he treats of dropsies, in which the urine is *not* coagulable. The coagulable or non-coagulable quality of the urine, however, so far from being connected with any particular sensible qualities, occurs under every variety of circumstances in these respects: the author mentions three varieties of urine, which is not coagulable, and these constitute the basis of three chapters. In chapter II. he treats of those dropsies, in which the urine is not coagulable, but is *pale*, *crude*, and *without sediment*, and sometimes *copious*: this is not very common in dropsical complaints, and usually indicates some serious injury of the internal organs; yet not invariably, for the first case followed scarlatina, and was speedily cured. In such cases, which approach to the diabetes insipidus of authors, diuretics are precluded, and alkalis, with mild bitters, are most serviceable. In Chapter III. he relates three cases, in which the urine (not coagulating) was rather *scanty*, but in other respects differed little from the healthy state. Two of these cases are ascribed to the deleterious effects of mercury. In Chapter IV. he describes 21 cases, in which the urine was not coagulable, but *scanty*, *high-coloured*, extremely *turbid* when cooled, and depositing a *lateritious sediment*. In his general remarks, at the close of this chapter, Dr Blackall seems to consider this scanty, and turbid urine, containing no serum, as more certainly indicative of visceral disease, than the preceding. Referring to these cases, he says, "I do not see amongst them one instance of anasarca, unconnected with some injury of the breast or abdomen, or some dropsy of those parts; and I believe that such an anasarca rarely, if ever, does assume the form described in this chapter. The same assertion may be made of the hydrocephalus, and particularly of that sudden metastasis to the brain, which often occurs in original dropsies." (55.) Four of these cases were ascites, conjoined with appearances of hepatic disease; four followed intermittents, and the spleen appeared to suffer; and in the remainder, hydrothorax, with extensive anasarca, was present, with a series of symptoms, admirably described by the author, and sufficiently indicative of visceral derangement. A loaded high-coloured urine is one of the first symptoms of the last mentioned cases; and the sense of stricture and pain in the side, the occurrence of the attacks in the winter season, and their aggravation by cold, as well as the frequent appearance of hydrothorax which he witnessed in old persons, after the influenza of 1803, lead to suspicions of some inflammatory action. These patients, the author observes, bear purging badly, which seldom carries off much water; and tonics, as well as high living, uniformly injure them. He considers the administration of squill as a diuretic, occasionally aided by small doses of mercury, by which the flow of urine is often materially increased, as the best mode of treating this form of hydrothorax. He adds some useful remarks on the mode of exhibiting the squill, and cautions the practitioner against the too free use of mercury.

In the V. chapter, he commences the discussion of those varieties of dropsy, in which the urine is *coagulable*, from the presence of serum.

> "The presence of serum in the urine, as discovered by the application of heat, is not entirely confined to dropsies. It certainly cannot be considered as a common occurrence in other diseases, much less in health; but sometimes, where without any effusions, the emaciation has been greater than could be accounted for by the obvious symptoms, I have suspected that this process was taking place, and in two instances have detected it, though in a very slight degree. In one of these, we found, on dissection, an extensive scirrhus of the stomach near the pylorus; in the other, there had been a large hæmorrhage from the nose, succeeded by the most extreme dejection of spirits and loss of strength. I have likewise some suspicions, that the excessive use of the alkalies and magnesia disposes the serum of the blood to pass off by the kidneys. This symptom is, however, rarely found to exist, perhaps never in any considerable degree, but as the sign of some dropsy either forming or already formed. These are anasarca, hydrothorax, ascites, and hydrocephalus, with their various combinations. Many cases, indeed, are very imperfectly described by either of these terms singly, and are rather a general dropsy, involving the cellular membrane extensively, and one or more of the large cavities likewise. For these there is no appropriate title in our books of nosology, &c.
>
> "The continuance of this disease is generally followed by a depravation of the whole habit, and by that sallow transparency of complexion, which cannot fail to strike even an inexperienced observer. There are many cases, in which these alarming signs give their character to the œdematous swellings from their very commencement, and in which the patients have been pronounced to be in a cachexy, even before the dropsy has been completely formed.—This state, although called a species of anasarca, has appeared to me to be entitled to a separate consideration in the present inquiry. It is very apt to terminate in universal effusions, and often in old subjects in an hydrothorax. Petechiæ are sometimes superadded to it; and it is then not easily distinguishable, if indeed it be at all different, from the land-scurvy." p. 72—3.

In the chapters from VI. to XI. inclusive, the author delineates, by a detail of numerous cases, with remarks subjoined, the various forms of this dropsical diathesis, which is accompanied by serous, or coagulable urine. The anasarca and general dropsy arise from four sets of causes, and Dr Blackall has accordingly arranged his cases under four sections; viz. those which are excited 1. by scarlatina, 2. by mercury imprudently administered, 3. by drinking cold liquors after being extremely heated and fatigued, and 4. by different circumstances of watching, fatigue, cold, strong liquors, visceral disease, or the injudicious employment of tonics. He then proceeds, to describe the cachexy, or tendency to dropsy; the cases resembling land-scurvy; and the hydrothorax, ascites, and hydrocephalus, attended with coagulable urine.

In the course of these details, many interesting circumstances are pointed out with great discernment, and illustrated by references to the observations of some of the older practical writers. As, however, the remainder of the volume consists of a review of these circumstances, and a statement of the inferences to be deduced from them, it would occasion much repetition, were we to stop to notice them here. We, therefore, pass on to the XIIth and subsequent chapters, in which the principal points are recapitulated methodically.

In chapter XII, which is brief, and not very correctly entitled the "Recapitulation," Dr Blackall makes but one or two general remarks. After noticing the fact, that the urine of dropsical patients assumes different and even opposite appearances, being sometimes dark, and thick, and depositing a sediment, and sometimes crude and little animalized, scarcely possessing urinous properties; he says, "I consider the former of these to indicate a strength of constitution, but an internal obstruction, and to require both active diuretics and deobstruents; the latter to denote a feeble and impoverished habit, either simply, or combined with great disease, and with an entirely broken state of health." (p. 192.) But in respect to the *coagulable* property by heat, he says, "it very generally, although not uniformly, attends what may be called original dropsy, and frequently is superadded to great visceral unsoundness; and there cannot be a more fruitful source of error in practice, than to consider it as an evidence of mere debility, a term so incorrectly applied to several different species of disordered action." p. 193.

In chapter XIII. the author recapitulates the symptoms of the different forms of dropsy, nearly in the same order in which he has arranged the cases. This recapitulation evinces considerable ability, and a close attention to the phenomena of disease. The most striking inference, which is deduced from a generalization of these phenomena, is the general presence of a state of inflammatory action, as evinced by local pains, frequent and hard pulse, and by an invariable buffiness of the blood, where that has been drawn. The statement of the symptoms and progress of the dropsy, which orginates from drinking cold water after excessive heat, will at once afford a specimen of the author's manner of treating the subject, and of the general facts.

" The dropsy from drinking cold water speedily follows the application of the exciting cause. The same suddenness of attack is sometimes observable, when the cause is less obvious, but often in the opinion of the patient connected with the external application of cold. Obscure chilliness is succeeded by heat and increased action, such as the phlegmatic constitutions, most liable to these complaints, are capable of raising; and particularly by a pain in the side. But the attention is soon diverted from these to the anasarcous swellings, which come on to a greater extent, and with more rapidity, than are observed in other instances. I have known a single fortnight completely sufficient for this effect; and the vulgar have attributed it to witchcraft.

" An œdema is now and then propagated over the whole body from one of the lower extremities, which for a few days has been observed to be rather painful and tense. The scarlatina likewise furnishes examples of this kind; and Dr Monro mentions a similar fact in consequence of a sprain of the wrist.

" The mechanical pressure of these diffused swellings will of course affect the breathing to a considerable degree; but the harsh cough, discoloured sputa, stitches in some part of the thorax, and inability of lying on one side, shew that the cause of this dyspnœa is often more deeply seated. The abdomen likewise becomes bloated, with thirst, costiveness, and some difficulty of procuring discharges. The pulse is generally hard or obstructed, and rising on blood-letting; the blood inflamed.

" This disease, if treated with indiscriminate remedies, proceeds to a fatal termination. The patient falls gradually into a cachectic state, and loses his appetite and digestion. Water accumulates in most of the great cavities; least frequently, perhaps, when the patient is of mature age, in the ventricles of the brain, but very suddenly; and the absorption from that part has been known to be as sudden as the deposition. In the thorax it is most common, most distressing, and productive of the greatest anxiety of mind. In some instances, a sudden death happens from this cause, in others a more lingering one; connected with sloughing ulcers of the lower extremities.

" In the last stage, the dropsy often disappears; the abdomen becomes flaccid; and a superficial observer might think some great relief were at hand. But the urine is never natural: a tympany succeeds to the ascites; the strength and nervous influence daily fail, the brain appears affected, and the scene is not closed till after the most complete emaciation has taken place. Nor do I know any sign more delusive, than a subsidence of the swellings, and an increased quantity of the urine, *if the character of it be not improved.*" 208–11.

In the sixth section of this chapter, Dr Blackall treats of the diabetes *serosus*, or an excessive discharge of serous urine. In describing the cachexy, or dropsical tendency, in chapter VII. he has quoted an observation of Van Swieten, who observed that the "marcor *vel* leucophlegmatia et hydrops," mentioned as the symptoms of cachexy by Boerhaave, occurred in this way: if the urine be increased in quantity the body wastes; if lessened, it swells. Dr Blackall considers this diabetes insipidus as preventing a dropsy, but producing no other benefit. On the contrary, he says, the system is more embarrassed by the loss of serum, than it would have been by its accumulation. There is a burning thirst, with fever, dry skin, and rapid emaciation, together with extreme despondency and fretfulness. The noted expression of *hydrops ad metulam*, he observes, is accurately descriptive of this serous diabetes; which is also alluded to by Dr Heberden, when he speaks of those diseased and infirm people, in whom "death must soon have ensued, whether the patient made too much water, and was wasted in a diabetes, or made hardly any, and was bloated in a dropsy." (Comment. chap. XXVI.) Dr Blackall thinks, that stimulating diuretics sometimes produce this affection; and speaks with confidence of its being occasionally excited by mercury.

In chapter XIV. the author continues his generalization, treating separately of the remote causes, of dissections, and of the proximate cause of these dropsies with coagulable urine.

The predisposition to such dropsy consists in an hereditary phlegmatic temperament, or in a similar feebleness of constitution, produced by poor diet, bad air, the depressing passions, and large evacuations, especially of blood. As there is often an inflammatory action from the very commencement, combined with the debility essential to the disease, so some of the exciting causes partake of this character. Hence the hydrothorax of *gouty* subjects, with obscure inflammation, resembling misplaced gout. The dropsy, which supervenes to *scarlatina*, appears to be brought on by cold; and Dr Blackall adduces strong evidence to prove, that an inflammatory diathesis is left by a *mercurial* course, in addition to the striking cases related by himself; although he admits that it may not be universally so. He thinks that the hydrocephalus has become more common of late among infants, *in consequence* of the excessive use *of calomel*, "which either not moving the bowels, as was expected, has given evidence of being absorbed, or, on the other hand, has purged too violently, and been succeeded by a diarrhœa without bile, and a prostration of strength, from which the little patient has never risen."—The use of copious *cold drinks*, by persons overheated, sometimes produces acute inflammatory diseases, such as pleurisy, and sometimes dropsy. The improper exhibition of *bark and steel* has frequently aggravated, and sometimes produced these dropsies, or at least first made them evident. (See Stahl *de Hydrope*.) This list of causes, Dr Blackall says, might perhaps be increased by the addition of some acute disorders, but he is unwilling to assert more than he has seen. "But the most important and most fatal of all agents, in producing this complaint, still remains to be mentioned, an unsoundness of the digestive organs, which impairs the nourishment of the body, vitiates the blood, and gives vigour and operation to every other cause." To this the abuse of spirits greatly contributes.

In the 2d section the author recapitulates the results of eight *dissections*, in all of which some chronic inflammation had obviously existed, most frequently in the pleura, "producing the effusion of a serous fluid, which is more opake and lymphy, and the membrane more disfigured, in proportion to the signs of general inflammation and of local pain, and to the firmness and quantity of coagulum in the urine." In two cases, there were small abscesses of the pleura pulmonalis. In four, the liver was diseased. In two "mercurial cases," the kidneys were firmer than ordinary; in one, approaching to scirrhus. "Some attention," the author adds, "is due to the state of the cellular membrane, described in two cases, No. II. and No. V. The appearances No. II, were truly remarkable, and answered exactly to the signs that had prevailed during life, of a sort of inflammatory anasarca, not distinguished by any redness of the surface, but a tension and soreness and puffy swelling passing from one part to another, as if the cellular membrane under the skin had been affected with an erysipelas." But he cautiously adds, that, while we find these various injuries in the head, thorax, abdomen, and even cellular membrane, we must not forget to put into the account those perfect recoveries, which prove the occasional mildness of the disease, and the little mischief which any of these parts have sustained.

Section 3d brings us to the *proximate cause*. Dr Blackall states a series of reasons for questioning the ordinary hypothesis, that dropsical effusion is the uniform result of debility of the parts, of laxity of the exhalent system, inactivity of the absorbents, and a watery state of the blood. These are, 1. That the serum of the affected cavities has often been found opake, discoloured, and containing pieces of lymph. 2. That besides these appearances, which imply a secretion different from that of mere relaxation, the membranes are sometimes greatly inflamed and disfigured. 3. That many of the remedies are antiphlogistic, and there is a certain stage, in almost every case of the disease, in which tonics do material injury. 4. That the blood is commonly buffy; and whilst it is accused of being too watery, the urine is loaded with albumen, which could hardly be expected as the result of too thin a blood; "on the contrary it is a very strong proof, if not of the excess of coagulable matter, at least of some newly acquired properties with regard to separation, and of an altered texture." "I add as a fact," the author says, "on which we cannot too often reflect, that where the urine is most loaded, coagulates by the lowest heat and most firmly, the blood is likewise most buffy, and the whole system bears the greatest marks of inflammation." 266.

Dr Blackall proceeds, after some cautious theorizing upon these facts, to show, that suspicions of an inflammatory state in dropsy are not new. Dr Grapengiesser, whose book was reviewed in the Edin. Medical Commentaries, but which the author has not seen, seems to have treated the subject in an original manner, in his dissertation "de hydrope plethorico." This author considers the plethoric dropsy as a more common occurrence than is suspected. He states it to come on suddenly in robust habits, slowly in weak ones, and to be attended by signs of peripneumony, with an inflamed blood. Much relief is experienced from large bleedings at the nose, and small repeated venesections, and from neutral salts. Common diuretics and strong purges do harm. The former species, or sudden attack, he has found readily curable by the antiphlogistic treatment, the latter with great difficulty curable by any means, but certainly only by that treatment, cautiously adopted.

The XV. chapter relates to the *cure* of dropsies with coagulable urine, and contains many valuable observations, respecting the discrimination of the remedies to be employed; but we have not room to enter into a full analysis of it.

The 1st section relates to *blood-letting and blisters*, and the author again endeavours to combat the common error, of imputing all discharges to debility, and endeavouring to check them by astringents. He says,

> "Stahl remarks, that hæmorrhages are cured by moderate depletion, but by the use of astringents and tonics are converted into dropsies; and our practice will be rational in dropsy itself, in proportion as we kept the spirit of this observation in our view. The loss of the serous part of the blood, which so remarkably distinguishes it, presents to us a symptom of a very debilitating kind; and our first consideration of the subject might naturally enough encourage us to at-

tempt its cure by those remedies, which, from their effects on occasions not apparently dissimilar, are called astringents. If however the doctrine of Stahl is ever true in an actual inflammatory hæmorrhage, it is certainly most strictly so with regard to this flux of serum. Whoever endeavours to restrain it by bark, steel, and similar remedies, will inevitably see reason to repent that attempt in an increased tension and fulness, a puffy countenance, a cough if there has been already none, and, in worse cases, a true peripneumony. The very symptom, for which he has prescribed, will likewise be aggravated." 277.

Dr Blackall, however, is no Sangrado; he speaks of the propriety of resorting to this depletion with caution, though without that extreme suspicion, which is sometimes entertained, against all weakening remedies in chronic diseases; and considers the firmness, copiousness, and early appearance, of the coagulum in the urine, as a correct guide, combined with the local pains, &c.

Sect. II. treats of *purgatives*. The use of these evacuants, especially of the more drastic of them, he considers as admissible and useful only " where the habit is indolent, and free from gout, and the dropsy extensive, without fever or local determination." They are wholly inapplicable in the cachexy, in which the stomach and intestines are very weak; and are of no service in hydrothorax. Indiscriminately employed, therefore, they must be attended with much hazard. In proportion as the complaint assumes an inflammatory aspect, the saline purgatives are more required, and the tartrites are especially preferable. They are indicated by a scanty urine, loaded with a lateritious sediment and with serum; and contraindicated by a pale watery condition of that discharge. " Often, I believe, it (the supertartrite of potash) unloads the urine entirely. I have known it do so partially only; but with such effect, that tonics easily perform the rest." *Antimonials*, the author observes, are useful in the phlogistic state, and greatly promote the operation of laxatives.

Sect. III. relates to *diuretics*, and contains some important observations. *Squill*, the author remarks, is much to be depended on, where, " with an oppression of the chest, the urine is scanty, high-coloured, full of sediment, and *without serum*." But in proportion as this is present in the urine, and " marked by its extreme constitutional characters, inflammation, and a weakness of the digestive organs, it fails in its effects, or is even injurious: particularly the debility and loss of appetite, that result from it, are often excessive." Under the same circumstances, all the stimulant diuretics, cantharides, turpentine, and the balsams, and those which are tonic and astringent, as the preparations of copper, are prejudicial. Hence we naturally turn to those which cool and attenuate, or which diminish inflammatory action. Such are the neutral salts, and, above all, the digitalis, the mode of exhibiting which is discussed at great length.

This important medicine has uniformly failed in Dr Blackall's hands, where the urine was *not* serous, and almost as uniformly succeeded, in the dropsy after scarlatina, where the urine was coagulable; sometimes even in the hydrocephalus, that follows that fever. It has succeeded also in dropsies, from other causes, when the habit was not entirely depraved, and the substance of the viscera not affected.

"But many of all these are cases, in which other means of relief, as occasional VS. mild purging, saline diuretics, may be resorted to with advantage. It is in circumstances nearly thought desperate (by other treatment), in the hydrothorax, in which even squills fail, that digitalis exerts a power truly astonishing. In many such cases, it acts both speedily and in small doses, and gives a relief wholly unlooked for. It is not too much to say, that lives are prolonged for many years by the discreet management of this remedy alone; and that by the rash mixture with it of other diuretics, and of mercurial deobstruents, the greatest risk is incurred of entirely changing the whole result."

For the author's judicious account of the doses and modes of exhibiting this remedy, we must refer to the work itself: but the following practical indications are too important to be omitted.

"When the organs of digestion fail, and there is a constant diarrhœa or sickness, and the bad habit of the body is more remarkable than the extent or seat of the dropsy, it has appeared to be rather injurious, by causing a still further debility of the stomach. In one instance of this kind, however, after bleeding, digitalis, combined with opium, succeeded. An *open ulcer* of the *lungs* is likewise a great objection to it; and it never performs a cure *whilst it purges*.

"Without any particular reference to other symptoms, and even where the patient has not been visited, the state of the urine itself furnishes an important indication on this subject. If, besides partially coagulating by heat, it is rather scanty, and moderately coloured, foul when made, and containing some red blood, or becoming turbid when cold, and depositing a branny or lateritious sediment, I expect much from the employment of digitalis. If, on the contrary, the urinary secretion, however loaded with serum, is pale and crude; much more if copious, the service derived from it will be very partial,

tial, and the dose must be small; and it will be well if it does no injury."—p. 299.

Section IV. contains some good observations on the *diet* of dropsical patients; and sect. V. treats of *tonic* remedies. When the water is evacuated, and the urine no longer tinged with albumen, bark or steel will restore the strength of the patient, especially after the use of digitalis. But while the albumen remains, tonics will reproduce the disease in its worst shape. For the use of *mercury*, in Sect. VI, Dr Blackall gives the following directions.

"Some firmness of the general habit, will, I believe, be the best encouragement to it; and although there may be many other circumstances capable of denoting such a state, which have been justly pointed out by Dr Maclean to be the same as call for the use of squills, yet I think the characters of the urine are the most easily understood, and least liable to any misconception. If that discharge errs chiefly by want of dilution, the presence of bile, &c. mercury is likely to render great service in the obstructions which are probably present, particularly those of the liver, and also to prove a true diuretic; and the swellings never pass off so readily and freely, as when the gums become affected. If, on the contrary, the habit is so depraved, that the coagulable part of the blood already passes off by the kidneys, the operation of this mineral is obviously very equivocal and hazardous."—p. 329.

In a postscript, Dr Blackall has made some observations on two papers of Dr Wells, on similar subjects, published in the 3d volume of the Transactions for the Improvement of Medical and Chirurgical Knowledge, since his work was completed; and in an appendix he has treated of the Angina Pectoris. But on this portion of his volume we have no room for comment. We have occupied a great number of our pages in the notice of this treatise, from a conviction that by contributing to make it known to the profession, we are conferring a benefit. Possibly the author might have condensed his materials within a smaller compass, and avoided some repetition, by leaving all his inferences and reflections on the cases to the concluding chapters. But as it is, we are persuaded that there are few practitioners, educated in the systematic nosological schools of the present age, who will not be benefited by the perusal of it. O si sic omnia!

II.

Dictionaire des Sciences Médicales. Par une Société de Médecins et de Chirurgiens. 8vo. Tom. I. et II. Paris, 1812.

"If a dictionary be sometimes the refuge of indolence, it is an useful resource in circumstances of emergency. It offers a collection of opinions at one view, and within moderate limits, suggests hints from sources beyond the reach of common acquirements, beyond the extent of a common library, and leads the inquiring mind into paths of which he might not have suspected the existence, or been unable to pursue the intricacies." So said an excellent writer in his preface to a work of this kind, which he projected in early life, and completed in the maturity of experience, and which contains the accumulated stores of forty years reading and observation. The best eulogium that can be pronounced upon such a work, is merely to repeat its title, and call it by courtesy *classical*, for among medical books of that rank, *The London Medical Dictionary, by Bartholomew Parr, M. D.* may safely be classed. In estimating the merits of the dictionary of medical sciences now publishing at Paris, we have had frequent occasion to compare articles in these English and the French works, and, upon the whole, our countryman gains by the competition. Dr Parr displays more learning and more precise information. His articles are more compact and more critical, and the results of his own experience are given with greater judgment and temper. He has hit the true medium of length, better than the French editors, whose entire work is intended to consist of twelve volumes, of 640 pages octavo. The first two volumes, which extend to letter B, have just reached us. Twenty-eight persons are engaged as co-operators, whose names are given in the title-page, and their signatures are severally affixed to the articles which are contributed. At the end of each article, the authorities consulted are put down, the principal books and best dissertations are recorded, some of them briefly criticised, by which means the reader can examine any questionable point. *Cuvier*, *Chaussier*, and *Gall*, superintend the articles on anatomy and physiology; *Hallé* and *Nysten*, the dietetical; *Pinel*, *Boyer*, *Larrey*, *Dubois*, *Geoffroy*, *Heurteloup*, *Alibert*, &c. &c. the medical and surgical; and to others are allotted their respective departments.

Among the early articles, that on *affusion* of cold water caught our attention and gratified us. It is neatly written, and contains a good summary of the best means of applying this important agent in febrile diseases. The use of it is strongly recommended by Dr Nysten, though he says the practice is not much employed in France; it has been adopted by Frank at Vienna, and by Dr Giannini in Italy, whose work on fevers is highly spoken of, especially for the observations it contains on the application of cold. This work has been translated into French by *Heurteloup*. Dr Giannini prefers immersion to affusion, because fewer prejudices are encountered by the idea of the cold bath, and the objections are more readily overcome. We fear those prejudices are too prevalent in this country, as well as in Italy, and the glorious opportunity of extinguishing typhus and scarlatina in the very first onset, is too often lost, through prejudice on one side, and timid compliance on the other.

Under the article *air*, we find the following statement of the temperature at Paris: In the hottest summers, the thermometer in the shade never rises above 26° or 28° of Reaumur's scale; and in the coldest winters the thermometer never falls lower than 15 or 16 degrees below zero. The remarkable cold of 1709, did not exceed this limit, and that of 1776 did not even reach it. So that at Paris there is a range in the temperature of 43 or 44 degrees between the greatest heat and greatest cold. This difference, however, is not usual, for, in an ordinary year, there is scarcely more than 29 or 30 degrees; that is to say, the temperature is commonly ranged between the 6th or 7th degree below zero, and the 23d or 24th degree above that point. The difference between the night and day is much less, but more variable. In speaking of the effects of moist and dry air upon the human constitution, the writers (*Hallé* and *Nysten*,) observe it is a well known fact, that, upon the hill of Montmorency, near Paris, which is dry, sandy, and exposed to a very keen air, patients with ulcerated lungs suffer very much, and find their disease aggravated and rendered sooner fatal, whereas, almost all other patients, especially those who are weak and relaxed, (les cachectiques,) find singular benefit there. The contrary effects are observed in the valley; and it is a matter of experience, that most of the epidemical diseases which prevail, either in autumn or spring, in the plain, seem to stop or to run aground, as it were, at the foot of this hill. *Agissante* (*Medecine*,) and *Alienation* (*Mentale*,) are two original articles by *Pinel*, which display a command of language and erudition, so desirable in discussing such topics.

Aliment is a long and elaborate article by Hallé and Nysten. They assert, that the bones are principally composed of gelatin and phosphate of lime. Fourcroy and Vauquelin have found in them a small quantity of carbonat of lime and of magnesia, oxide of manganese, and oxide of iron. These chemists have established, that the sulphat of lime found in bones by Berzelius, does not exist, except when these substances were in a fossil state, that is to say, have been buried a long time under ground.

Those fluids which contribute to the nutrition of the body are examined with appropriate attention. We translate the account of the chyle:

"The great difficulty of procuring any quantity of chyle from the human body, has prevented the analysis of this fluid. Different observations have long ago been made by physiologists upon the physical properties of the chyle of different animals. Of late years, the chyle of the horse has been examined successively by M. M. Dupuytren and Thenard, by Emmert of Berne, and very recently by Vauquelin. The general results of these examinations are, 1*st*, The chyle, white as milk in the lacteal vessels, begins to assume in some places a roseate hue, in proportion as it advances to the thoracic duct; and it is particularly visible in that part of the canal nearest the subclavian vein. 2*dly*, The chyle taken from the thoracic duct, begins immediately to coagulate, like blood drawn into a vessel, and assumes from the air a rose colour, more strongly marked. 3*dly*, A serous fluid, almost entirely of an albuminous nature, exudes from the coagulum like that from blood. 4*thly*, The coagulum, washed in water, imparts to it its colouring matter, and takes the form of small white fibres, resembling the fibrin of the blood. 5*thly*, The chyle contains different salts, especially an alkaline muriate and white phosphate of iron at its mininum of oxidation. Vauquelin has farther observed, that the serum of chyle speedily restores the colour of turnsol reddened by acids, which proves that it contains an alkali uncombined; alcohol, in precipitating the albumen of this serous fluid, dissolves a fatty matter, insoluble in alkalies, like that which the same chemist has found in the brain, and this substance is also found in the coagulum of the chyle. The fibrous part of the chyle, although very analogous to that of blood, differs from it in having a less fibrous texture: it has not the strength nor elasticity which belongs to the fibrin of blood; it is more readily and more completely soluble in caustic potash, and does not leave an insoluble residuum in this alkali, a property which makes the fibrin of the chyle approach albumen. The quantity of fibrin increases in the chyle, in proportion as this fluid reaches the place where it passes into the sanguiferous system, consequently the chyle, in the course of its circulation, becomes more and more coagulable."—p. 335.

In the account of aneurism by *Richerand*, many obsolete notions are retained, and the advantages of the operation by ligature, along with all the wonderful resources of the powers of circulation by anastomosis, are very imperfectly appreciated.

The writer discredits Scarpa's opinion respecting the cause of aneurism, but he advances not a single argument against his assertion of the impossibility of the coats of the artery being dilated without a rupture. Great fears are still entertained of gangrene coming on the limb after tying the artery. This is dreaded as much as secondary hæmorrhage after the operation, and bags of hot sand are directed to be placed around the limb to prevent mortification. Compression is favourably spoken of, and even recommended for the radical cure of aneurism in the extremities; and a case of a grocer is related, who was lately cured of a popliteal aneurism, by confining himself to absolute rest for a whole year, lying in bed, eating very sparingly, by being bled every month, and by making constant pressure upon the crural artery, as it passes through the triceps muscle. *Professeur Dubois* has treated several cases lately in a similar manner, it is said, with complete success, and the same practice has been adopted by other practitioners at Paris. Another mode has been proposed, and tried in two instances of popliteal aneurism; it seems to have in view the same object as the cure by compression, viz. to obliterate the canal of the artery gradually. A ligature is passed round the crural artery, but it is not drawn very tight at first, so as to stop the circulation; it is gradually tightened until the pulsation in the tumor ceases, and then it is removed. This operation appears to us very hazardous; and we are strongly disposed to believe, that the safest and best mode of curing aneurism, is to tie the artery, and divide it between the two ligatures; since numerous facts and experiments have demonstrated that the apprehensions about the circulation being carried on through the anastomosing branches, are entirely groundless and hypothetical. The principle by which the ligature acts in effecting the cure of an aneurism, does not appear to be understood by any of the hospital surgeons at Paris, for we find Richerand, Pelletan, and others, cutting and scraping the aneurismal sac; and, so lately as July 1810, it is here recorded, that *M. Duret, ancien chirurgien-major*, proposed a newly invented pair of spring forceps, to press the coats of the artery together, and to keep them in contact, without danger of dividing the coats of the blood-vessel asunder.

Guillemeau is said, for the hundred and tenth time, to be the real author of the operation which goes by John Hunter's name, but we must again repeat, that he was not. The splendid discovery made by John Hunter, was to tie the artery several inches above the tumor, in a sound and healthy part; to leave the tumor alone to be absorbed; and to trust to nature to supply the circulation, and to complete the cure. This is a proceeding which no

French surgeon seems inclined to comprehend; they uniformly disregard what Hunter taught, and criticise what he never wrote or thought. It is mortifying to see how slow the progress is which any improvement makes; but we do hope, that the facts recorded by Home, Abernethy, Cooper, and Scarpa, will have their due weight and influence on the mode of operation adopted by surgeons in every part of the world.

Angine (Angina) is a good article, executed with elaborate attention by *Renauldin*. The consideration of the seat of this inflammation leads the writer to make two distinct divisions of the disease; one of which is seated in the tube which leads to the stomach, the other in the tube which transmits air to the lungs. The first species he calls Angina faucium, and he makes three varieties: 1. Angina tonsillaris; 2, Angina pharyngea; 3 Angina œsophagea.

II. Species. Angina ductus aerei. 1. var. A. laryngea; 2. var. A. trachealis; 3. var. A. bronchealis.

III. Species. Angina maligna.

We quote the description of angina laryngea as a specimen.

" *Angine laryngée.*—§ xxix. Lorsque la membrane qui revêt les cartilages du larynx et principalement l'intérieur de la glotte vient à s'enflammer, une vive douleur se fait sentir pendant les mouvemens que l'organe exécute dans l'acte de la déglutition, qui du reste est libre; cette douleur devient beaucoup plus importune toutes les fois que le malade veut parler ou élever la voix; celle-ci rend des sons aigres et très aigus; il survient une toux sèche, presque suffocante, une respiration petite, très pénible, stertoreuse, à cause de la constriction qu'éprouve l'entrée du larynx; la face est rouge et animée; les yeux saillans. Tantôt cet état d'angoisse est suivi d'une mort prompte par suffocation, ou par le dévelopement d'une fausse membrane dans le larynx: d'autres fois une résolution salutaire termine la maladie dans l'espace de quatre à sept jours: il n'est pas rare de voir cette angine passer à l'état chronique et dégénérer en ulcération habituelle, qui constitue alors une phthisie laryngée.

" §. xxx. Lorsqu'on fait l'ouverture des individus suffoqués par cette affection aiguë, on trouve la tunique interne du larynx et de l'épiglotte rouge et gonflée, quelquefois recouverte d'une couche membraniforme, mince et blanchâtre, facile à couper et à détacher. Tantôt l'ouverture de la glotte est excessivement rétrécie par la tuméfaction des parties qui la forment; d'autres fois on rencontre les ventricules du larynx remplis d'un liquide épais, noirâtre, semblable à du sang décomposé. Souvent les mêmes désordres s'étendent à la trachée et aux bronches. (Reil, *Memor. Clin. Fascic.* III.)

" §. xxxi. Cette variété d'angine peut se compliquer avec quelqu'une des précédentes (§. vii, xxi, xxii); elle s'unit fréquemment aux deux suivantes (§. xxxiii, xxxvi), et parfois elle est accompagnée d'une fièvre de mauvais caractère, d'une péripneumonie, etc.

On doit toujours la regarder comme une maladie grave, dont le prognostic reçoit les applications de ce qui a été dit plus haut. (§. xiv.)

"§. xxxii. Le traitment est à peu près le même que celui que nous avons tracé (§. xv.) Ainsi il requiert les saignées locales ou générales, les boissons douces, les pédiluves sinapisés, les épispastiques, et surtout l'inhalation fréquente de vapeurs émollientes. Mais il y a une circonstance qui exige de plus prompts moyens de soulagement; nous voulons parler de la suffocation qui, si elle est imminent, forcera de la recourir à la trachéotomie. Lorsque la maladie, sans être actuellement mortelle, résiste opiniâtrement aux secours les mieux administrés, elle passe au triste et incurable état de phthisie." p. 125, 126.

It will perhaps afford some consoling intelligence to the defeated reformers, to learn that their brethren in France are not benefited by acts of Parliament, licenses, stamps, and ordinances; for under the article *apothicaire*, grievous complaints are made of the abuses which have crept into that branch of the profession, and of the number of improper and unqualified persons who practise pharmacy, in spite of the police, and in defiance of laws to keep quacks down.

In speaking of *arsenic*, it is said, the French physicians have not been successful in employing Fowler's solution, as recommended for the cure of several diseases in this country; and it is asserted that *Broussais*, one of their best clinical observers, declares, that almost all the patients who have been cured of intermittents by arsenical preparations, have died some months afterwards, either from phthisis pulmonalis, or from chronic inflammation of the mucous membrane of the stomach and intestines. A work by *Christ. Fred. Harles*, "*De arsenici usu in medicina*," 1 *vol. in 8vo, Norimbergæ*, 1811, is highly praised, as being the most complete treatise ever published upon this subject, and as being the cause of some important regulations respecting the sale of arsenic issued lately by the King of Prussia.

The second volume concludes with a learned account of baths and bathing (*Bain*), which will diffuse a knowledge of the results of all the interesting observations that ancient and modern writers have collected on these topics.

Many disgusting methods of treatment are recommended in several articles which we have read, such as the application of leeches to the vagina in amenorrhœa, and to the anus and vagina in amaurosis; putting young puppies of a large breed to draw the breast, and to form the nipple, and other odd fancies. But we must not forget that this dictionary is composed for the practitioners in France and on the Continent, and we then shall find the number of elaborate and unexceptionable articles exceeds those which are not drawn up with that degree of perfection of which they are susceptible.

III.

Tracts on Delirium Tremens, on Peritonitis, and on some other internal Inflammatory Affections, and on the Gout. By THOMAS SUTTON, M. D. of the Royal College of Physicians; late Physician to the Forces, and consulting Physician to the Kent Dispensary. 8vo, pp. 272. London, 1813.

WE have been pleased and instructed in the perusal of these tracts; and must applaud the candid and unostentatious manner in which so much information is conveyed. Had we been consulted, however, we should have recommended a different mode of communicating observations like the present to the public. We disapprove of inflating a volume with individual cases, unless when each case contains something important, which could not be so well detailed in a more general way, or when a number of individual cases, with all particulars, are required to establish new facts, which might otherwise be disputed. We have no hesitation in saying, that the substance of this volume, excellent as it is, might have been well, indeed far better, condensed into the space of half a hundred pages.

The first of these Tracts consists of cases and observations on Delirium tremens; a name employed by Dr Sutton to designate a disease, concerning which we have already occupied our pages, in giving the valuable communications of Dr Pearson and Dr Armstrong. It appears that Dr William Saunders has, for many years, lectured on this affection at Guy's, discriminating it from phrenitis. We agree with Dr Sutton, that the investigation of the Delirium tremens has been unaccountably neglected; but, from what we have ourselves published on the subject, it can scarcely be said, that it "has not yet taken a station in medical writings."

The attack of this complaint is more or less sudden, in different instances. Sometimes for a few days at its commencement the patient is merely incapable of his ordinary duties and exertion; a constant restlessness, debility, and inappetency, and occasional vomiting take place, with dulness and dejection of spirits, and headache; in a short time confusion of intellect; a staring wildness of the countenance; tremor of the hands, and in some degree of the whole body, succeed. The pulse is not so frequent as in the delirium of fever, nor so full and strong as in phrenitis; it seems to participate in the universal hurry and tremor. The tongue is usually moist; and there is little thirst or heat of skin. The bowels are generally, though not invariably, open.

Occasionally the patient recovers without farther aggravation of symptoms: but too frequently the disorder becomes more violent; the countenance becomes more anxious and wild; the tremors assume the aggravated character of subsultus tendinum; and the confusion of ideas is displayed in total forgetfulness, in complete alienation of mind, and unrestrained delirium. The pulse is at length very frequent, but cannot be distinctly felt, on account of the general tremor. Still the tongue remains moist, there is little thirst, and the skin is totally cool, sometimes with a clammy perspiration; in the violence of the symptoms there are sometimes involuntary evacuations.

The duration of these symptoms is various; they rarely continue, in the degree of violence described, for more than a few days; but in a milder form, they sometimes endure for some weeks.

This affection appears to arise only in persons addicted to spirits, and in consequence of excess or habitual indulgence in them. Dr Sutton relates the case of a lady who suffered from the delirium tremens, from habitually taking the tincture of lavender, in large quantity. The disease frequently occurred to Dr Sutton's observation, on the coast of East Kent, from the facility with which smuggled spirits are there procured. p. 56.

There exists much obscurity respecting the nature of this disease. We have no accurate dissections of the bodies of those persons who have died from it. Fortunately, under Dr Sutton's care, few instances affording an opportunity for dissection have occurred. It is regarded by our author, though we believe without sufficient evidence, as an idiopathic disease of the encephalon. It is more insidious than inflammation of the brain, and is not attended by the same violence of fever, or the same intolerance of light or sound; and it appears, in some measure, to be characterized and distinguished from phrenitis, by the peculiar tremor already noticed. The state of the pulse, too, and of the tongue and skin, are sufficiently peculiar to afford the means of discriminating it from inflammation of the brain. We must rely also on the same symptoms in distinguishing between delirium tremens and idiopathic fever with delirium.

It does not appear so easy to decide between the delirium tremens and mania. Dr Sutton appears to rely too confidently on the distinction arising from the nature of the mental alienation, which, in the former disease relates, as he conceives, solely to the patient's private affairs. But this is by no means the case. We have, at the very moment of writing these lines, a patient whom it is impossible to convince that he is in his own room at home; and that his desks and chests are secure from depredation. Besides, mental alienation is so infinitely varied, that it would be impossible to confide in any variety of it, as a means of diagnosis; and we may add, that, of all kinds of mania, none is more frequent than that which engrosses the mind by the private affairs of the individual.

We now proceed to speak of the cure of delirium tremens. Dr Sutton gives ample and satisfactory testimony to the efficacy of opium, in soothing the agitation of body and mind, and in inducing refreshing and salutary repose. It is given in considerable doses, and repeated until the effect desired be induced. When smaller doses have proved ineffectual, two grains of the extract, or forty drops of the tincture of opium, taken after the interval of two hours, have, in the third or fourth instance, frequently produced the desired tranquillity and sleep. Dr Sutton usually repeated this medicine every night, for a short period, after the patient had in a considerable degree recovered.

Dr Sutton disapproves entirely of the depleting plan of treating this affection, having "witnessed the cases of this disease to be always the most rapidly fatal in robust and plethoric persons even, where blood-letting was most used, without the aid of opium." Dr Sutton does not deny that blood-letting may be necessary in some cases; but when the loss of blood may have been deemed requisite, he would immediately afterwards resort to opium, as the only remedy deserving confidence.

Of blisters, Dr Sutton speaks with decided disapprobation. He considers them not merely as useless, but as absolutely detrimental, exciting serious irritation, and opposing the soothing virtues of the opium.

Purgatives may be required, not as remedies for the disease, but to remove costiveness, which is occasionally obstinate from the employment of the opiate remedies.

Dr Sutton does not give us any account of the effects of wine and cordials in this complaint. He seems to have relied, and with good reason, on the efficacy of his favourite remedy, opium. In conclusion, he states, that he has witnessed 22 cases of the delirium tremens, within the last three years; that four only died, and of these four, three were in such a condition on his first visit, as to preclude almost all hope of recovery.

Observations on inflammation of the peritonæum, and especially on the chronic kind of this affection, constitute the second part of the volume. This form of the complaint has been treated of by Willan and Pemberton. It is an insidious, obscure, but a very serious and dangerous disease. Dr Sutton observes, that from this circumstance, and from the general uneasiness, languor and depression of spirits attendant on it, it is often mistaken for indigestion, hypochondriasis, or what is termed a nervous complaint; it is therefore treated carelessly, or neglected, until the disease is, on some occasion, unexpectedly aggravated, and assumes the more acute character. Sometimes its progress continues without any remarkable exacerbation, slowly and insidiously, to a degree of imminent danger, before any particular alarm has been excited. Uneasiness or obscure pain is felt in some part of the abdomen, sometimes little increased on pressure. The appetite is impaired, and food taken increases the distress of the patient; the pulse is not materially affected; the bowels are not obstinately costive.

We do not notice the symptoms of the aggravated form of peritonitis, as they are too well known to our readers to need repetition here. The inflammation is apt to extend to the other parts and organs of the abdomen, to give rise to effusion of lymph or serous fluid, and the formation of adhesions and dropsies. This complaint has also a particular tendency to become suddenly increased, and when apparently removed to make an unexpected return. In many of the patients whose cases are related by Dr Sutton, the inflammation returned several times; from this circumstance, it is inferred, that more and longer attention to regimen and diet is necessary than is usually enjoined after acute diseases. Dr Sutton notices, in particular, the following, as necessary injunctions on the convalescent: First, to avoid too much exercise, and especially those kinds which require the action of the abdominal muscles, and which agitate and disturb the contents of the abdominal cavity. Secondly, To avoid any tendency to costiveness of the bowels; and, thirdly, to abstain from excess in diet, and altogether from the stimulus of wine.

Dr Sutton recommends the early employment of the lancet in peritonitis. Of blisters and fomentations he entertains a dubious, or rather a low opinion. But he in particular advocates the application of a cold lotion to the abdomen; he presents us with many instances in which this remedy appears to have been of undoubted utility. We are inclined, therefore, to hope for some good from this remedy, and are happy to refer our readers to a previous part of our present number for further observations on the subject. It appears from Dr Sutton's observations, to be peculiarly adapted to the chronic state of peritonitis, where the symptoms are not such as to justify blood-letting. Dr Sutton also recommends the exhibition of opium in inflammation of the peritonæum, as efficacious in subduing a tendency to vomiting, and in mitigating the severity of pain and suffering of the patient. We begin, however, to suspect Dr Sutton of too strong an attachment to this remedy; we have it again recommended in diseases of thoracic viscera, and again in gout. P. 191, 216.

We have, at the close of this tract, some observations on the application of the cold lotion in inflammation within the chest,—of the lungs, and perhaps of the heart: it is difficult to ascertain with what real and essential benefit; but, apparently, with relief to the pain, and satisfaction to the feelings of the patient, and certainly without inducing any of those bad effects which we should have been inclined to have feared from it.

In this part of Dr Sutton's work, we have two letters from A. Stewart, M. D. and minister of Bolton, on the subject of treating complaints of the chest. From these we make the following extracts, as they contain all the peculiarities of that gentleman's mode of treating these affections, now so much in vogue among the higher classes in this part of the island.

> "In treating breast complaints, it has long been with me a maxim, to overlook comparatively the idea of inflammation, except in the very first stage; and to aim *gradually*, *prudently*, and *steadily*, at regaining a *cool, braced*, and *properly seasoned* state of the constitution, as my first object.
>
> "Many reasons, which I need not now specify, incline me to suppose, that what, in the progress of breast complaints, is called an *inflammatory state* of the lungs, is not really so (I mean not a *real active* inflammation); and, at any rate, I know, from a good deal of experience, that it yields more readily to a different mode of treatment, than that commonly in use."
>
> "I propose a trial of the following things:—Diet that is nourishing, without being stimulating, as (besides milk and vegetables) an egg, a bit of fresh animal food, beef-tea, broths, and particularly veal broth, jellies, and arrow-root; and for drink, water, either pure, with sulphuric acid, or with a *tinge* of port-wine, or occasionally spruce-beer, ginger-beer, or common small-beer. As much exercise as possible, without fatigue, on a spring-deal, within doors, and in a carriage in the open air. A regular system of spunging the body with water and vinegar (at first tepid, and afterwards cooled down to the natural temperature) at least once a-day, and following it always with a great deal of rubbing; and a blister issue on the breast.
>
> "As to medicine, I recommend a cupful of cold infusion of bark, with some drops of the sulphuric acid twice a-day; and, I think generally, some preparation of steel with a bitter.
>
> "I am also partial to the use of the Plummer's pill, in such cases as Lady ——'s, but it was not mentioned in my letter; and, on coming to London, I found it inadmissible, from the state of her bowels."- p. 180, 182.

Dr Sutton concludes, that "there are cases of consumption which will stand a better chance of recovery on Dr Stewart's plan, than the common routine of practice;" although he "finds no ground to hope that it will ever be ranked in any other class, than among the most fatal diseases."

Dr Sutton suggests, that, as the momentary application of cold water, in the form of affusion or ablution, is so effectual a febrifuge, that the more continued application of the lotion would be likely to afford beneficial results in continued fevers; a suggestion which undoubtedly deserves a fair and ample trial.

The last part of this volume is devoted to the consideration of the cure of gout, which may be called the disease, as well as the opprobrium medicorum. We were not in the least surprised to find that Dr Sutton, as well as Sydenham, Cullen, Brown, Gregory, and a thousand other eminent physicians, has been afflicted with this malady.

Since the veil of hypothesis has been removed, we have not heard so much of the danger as of the difficulty of removing the arthritic paroxysms. Without pretending to say that all that was formerly thought or written on this point was wrong, and that there is absolutely no danger of metastasis in gout, we believe that it is now the general opinion, that, in persons of unbroken constitution, the cure of the gouty paroxysm may be safely attempted. Dr Sutton thinks that gout has too long been regarded as a disease of the system. His opinion is, that its principal and exciting cause resides in the alimentary canal.

But it is of more importance to our readers to learn the facts, than the opinions which Dr Sutton's work is intended to support. The most material of them is, that purgatives, opium, and cold topical applications, are safe and efficacious remedies on the first attacks of the gout; for we omit to notice the excellent, but well-known rules which are here given respecting the regimen of diet and exercise. One part of regimen, indeed, is here, with much propriety, particularly insisted on, namely, constant attention to the state of the bowels. It is on this principle that laxative mineral waters are effectual in preventing the paroxysm. And this is especially necessary after the use of purgatives, which generally leave a tendency to costiveness. The *eau medicinale* has, in particular, a tendency to contract the bowels; and, therefore, although it may remove the paroxysm of gout, when present, it renders its return more frequent.

Dr Sutton proposes to imitate the effects of the eau medicinale, by the combination of a grain or two of elaterium, with forty or fifty drops of tincture of opium; and this medicine has been administered with success. The frequent use of the eau medicinale has afforded the best means of judging of the effect of purgatives. Dr Sutton seems to have derived much advantage from ordinary purgatives, and from the use of opium, and local application of cold, in his own case. But we do not find any very extended trial of these remedies in the volume before us. We rather regard the subject as brought forward for discussion, than as having received a full and fair investigation.

In conclusion, we have only to repeat our almost unqualified approbation of these valuable tracts. We think we have given our readers the most material part of the volume; but still must do the author the justice to say, that those who have recourse to the original work itself, will derive additional gratification and instruction.

IV.

An Essay towards a Theory of Apparitions. By JOHN FERRIAR, M. D. 12mo, pp. 139. Cadell and Davies, 1813.

ABOUT three years ago, we were favoured by Dr Alderson of Hull, with an interesting communication on the subject of spectral illusions, in which he traced their occurrence to certain physical changes in the system of the individuals, to whom the illusions presented themselves *. In two or three interesting cases, which had occurred in his own practice, the perceptions of the objects, supposed to be present, were as distinct as those arising from the ordinary impressions upon the organs of sense, and the conviction of their reality, was at first, therefore, as complete. Nevertheless, the recurrence of the apparitions was obviated by physical expedients, and the patients were ultimately convinced of the illusion.

Dr Ferriar has brought forward this amusing little volume, to support the same view of the subject, drawing upon his well-known stores of curious reading for instances in illustration. He sets out by admitting, as an undeniable fact, that apparitions have been seen, and the voices of dead or absent persons heard, by people competent to give testimony on the matter; and then proceeds to inquire, " whether such extraordinary and terrific impressions cannot be explained, *from the known laws of the animal economy*, independent of supernatural causes, in the examples furnished by profane history."

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* See Edin. Med. and Surg. Journal, for April 1810.

It is well known, he remarks, that in several diseases of the brain, such as delirium and insanity, spectral delusions take place, even during the space of several days: but it has not been so generally observed, that a partial affection of the brain may exist, which renders the patient liable to such imaginary impressions, either of sight or sound, without disordering his judgment or memory. Such a condition of the sensorium, however, has, doubtless, given rise to all the authenticated histories of apparitions that are recorded.

The author systematically divides his inquiry into three parts; considering 1. the general law of the system, to which the origin of these delusive impressions are referable; 2. the proof of their existence; and 3. applying these considerations to the examples on record: but the arrangement is not very systematically pursued.

He traces these spectral illusions to that general law of the human economy, by which impressions upon the organs of sense remain more or less for some time after the impressing cause has been removed. This law has been particularly illustrated by Dr Darwin in his essay on ocular spectra; and is exemplified in the facility with which all recollected impressions are renewed, even dreams, and very obscure impressions of sense; as in tracing landscapes in the discoloured spots of an old wall, and figures in the fire, or in fancying the encounter of armies in the aurora borealis, or their march over desart places in mountainous regions. "The accidents of light and shade, and the interposition of partial fogs or clouds, produce the same effect on the eye, as the discoloured patches of the wall, and the rolling of the mist adds motion to the spectral images." When associated with strong emotions, as of terror or despondency, the force of these renewed impressions is increased tenfold. Dr Ferriar relates a very whimsical story of a ghost, conjured in this way out of moonbeams, in a room which had the reputation of being haunted, by one of his friends, on waking from a frightful dream.

Dr Ferriar observes that, in certain states of the brain, the forms of objects, which have no external prototypes, are exhibited to the mind: but, in all these cases, (and Dr Ferriar has collected several goblin stories in illustration) the images presented to the mind are always the recollected impressions of objects, which the individuals have previously contemplated in pictures or in description. A long and curious detail of a series of spectral appearances, of various character, is quoted from Nicolai, an eminent literary person of Berlin, who was for some time liable to these illusions; yet his mind was in a tolerable state of sanity; he could even distinguish between the phantasms and real objects, and he sometimes even amused himself by surveying them. The visions of Cardan, the maid of Orleans, Dr Donne, and the instances of "second-sight" in the Highlands, and others, which Dr Ferriar has quoted, are resolvable into the same principle. His third chapter is altogether occupied in the relation of several extraordinary visions of Beaumont, Tasso, Kotter, Drabicius, Arise Evans, and Bovet, which are obviously of the same nature with the morbid perceptions, that accompany certain disordered conditions of the nervous system, especially epilepsy and hysteria. From the *musca volitantes*, or wandering mote before the eye, to the tremendous spectre, which is equally destitute of existence, the illusion is of the same kind: Such impressions are sometimes produced by the occurrence of disease, and sometimes, no doubt, as Dr Ferriar remarks, they have been excited or strengthened by narcotic drugs, either ignorantly taken, or maliciously administered. The same observation applies to illusions of sound. Dr Ferriar observes, with respect to Cardan, who believed himself possessed of a faculty of divination, by means of voices conveyed to him in different directions, that "he certainly mistook the symptom called *tinnitus aurium*, which accompanies the disease of literary men, for special warnings."

Before we conclude, we shall quote the following illustration, as an interesting instance of spectral illusion. The author says,

> "From the principles which I have established, the reader will easily proceed with me, to account for the most imposing relations of apparitions. I have shewn that a morbid disposition of the brain is capable of producing spectral impressions, without any external prototypes *. The religion of the ancients, which peopled all parts of nature with deities of different ranks, exposed them, in a peculiar manner, to the delusions of the imagination; and I have had occasion, in another essay, (on Genius,) to mention the influence which the doctrines of Plato have exerted, in this respect, even since the establishment of Christianity. From recalling images by the art of memory, the transition is direct to beholding spectral objects, which have been floating in the imagination. Yet, even in the most frantic assemblage of this nature, no novelty appears. The spectre may be larger or smaller; it may be compounded of the parts of different animals; but it is always framed from the recollection of familiar, though discordant images.

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* This is rather paradoxical than strictly true; because as the author affirms that they are *recollected* impressions, they must have been derived from former *actual* impressions, which were their prototypes.—*Ed.*

"The simple renewal of the impressions of form or voice, in the case of particular friends, is the most obvious and most forcible of these recollections. Of this kind seems to have been the celebrated apparition of Ficinus to Michael Mercato, mentioned by Baronius.

"Those illustrious friends, after a long discourse on the nature of the soul, had agreed that, whoever of the two should die first, should, if possible, appear to his surviving friend, and inform him of his condition in the other world. A short time afterwards, says Baronius, it happened, that while Michael Mercato the elder was studying philosophy, early in the morning, he suddenly heard the noise of a horse galloping in the street, which stopped at his door, and the voice of his friend Ficinus was heard, exclaiming, O Michael! O Michael! those things are true. Astonished at this address, Mercato rose and looked out of the window, where he saw the back of his friend, dressed in white, galloping off, on a white horse. He called after him, and followed him with his eyes, till the appearance vanished. Upon inquiry, he learned that Ficinus had died at Florence, at the very time when this vision was presented to Mercato, at a considerable distance.

"Many attempts have been made," Dr Ferriar adds, "to discredit this story, but I think the evidence has never been shaken. I entertain no doubt, that Mercato had seen what he described; in following the reveries of Plato, the idea of his friend, and of their compact, had been revived, and had produced a spectral impression, during the solitude and awful silence of the early hours of study. Baronius adds, that, after this occurrence, Mercato neglected all profane studies, and addicted himself entirely to divinity."

Dr Ferriar adduces some other interesting examples of a similar kind, and illustrates the influence which the associations of time, and place, under particular states of mind, have in bringing strong recollections before the view. And he concludes, by deprecating the sceptical disdain, on the one hand, and the vulgar terror, on the other, with which unaffected accounts of spectral visions are commonly received; and by recommending an accurate examination of them, with a view to ascertain their exact relation to the state of the brain, and of the external senses. The result of this would be, that the terror of nocturnal illusions would at length be dissipated; and "the appearance of a ghost would be regarded in its true light, *as a symptom of a bodily distemper*, and of little more consequence than the headache and shivering attending a common catarrh."

Dr Ferriar has certainly produced an entertaining essay; but, on the whole, the arrangement of his materials is not well chosen for the purpose of perspicuity of illustration, and he has not, therefore, been quite so happy as usual in impressing the point of his argument, namely, the clear *physical* origin of the hallucinations in question. The general reader, who is not prepared for this view of the subject, will not rise from the perusal, perhaps, with a conviction of the truth of this proposition; or be able always to distinguish the serious statement from that which is ironical and paradoxical.

V.

A Treatise on Febrile Diseases, including the various species of Fever, and all Diseases attended with Fever. By A. P. Wilson Philip, M. D. F. R. S. Edin. Fellow of the Royal College of Physicians of Edinburgh, Physician to the Worcester Infirmary, &c. London, 1813.

The principal improvements which Dr W. Philip has made in the present edition of the Treatise on Febrile Diseases, consist in the condensation of the work in general; in additional observations afforded by his more extended and mature experience; and, in particular, in the new view here presented us of a nosological arrangement of febrile diseases, an outline only of which was contained in the former editions.

The following are the circumstances in which this arrangement differs from that of Dr Cullen. It appears to Dr W. Philip, that as local diseases are the most simple, and frequently form part of the more complicated diseases, the class Locales should be the first in a nosological system; in which class he thinks that simple inflammation, hæmorrhagy, and serous discharge should be arranged; and points out many difficulties in which Dr Cullen is involved, by having adopted a different mode of arrangement. Simple fevers, and the exanthemata, according to his arrangement, form the second class, under the title of Febres Idiopathicæ; and the combinations of local diseases and simple fevers, he arranges in a third class, under the title of Febres Symptomaticæ, comprising the Phlegmasiæ, Hemorrhagiæ, and Profluvia; and in the general introduction, he enters at length on the reasons for this change in Dr Cullen's arrangement. In enumerating the species and varieties of intermitting fever, he deviates considerably from Dr Cullen's mode of arrangement, dividing them into regular and irregular; and admitting a fourth genus, the Intermittens longa. He also divides Dr Cullen's third order, the Exanthemata; contending that small-pox, chicken-pox, measles, scarlet-fever, plague, and nettle-rash, alone deserve the name of exanthemata; and that all the other diseases arranged by Dr Cullen in this order, are to be regarded only as varieties of continued fever. In the general introduction, he considers, at some length, the supposed claim of each of these to be regarded as an exanthema.

He also proposes considerable changes in the definitions and divisions of certain genera. He objects to Dr Cullen's division of pneumonia into peripneumonia and pleuritis, for which he offers his reasons at length, in treating of that disease, and also for including under the term Pneumonia, carditis, pericarditis, and all other inflammations of the thoracic viscera. He divides pneumonia into three species, the Pneumonia vera, Pneumonia notha, and Pneumonia phthisica. Most of the other changes proposed, depend on his having assumed, as principles of nosological arrangement, that it should never be founded on the causes of disease; that these should seldom, if ever, form any part of a nosological character; and that symptomatic and complicated cases, and sequelæ of diseases, have no place in a nosological system, except that the last may sometimes form part of the character. See Vol. II. p. 569.

Dr W. Philip, in introducing these alterations in the arrangement of Dr Cullen, points out the impropriety of separating the febres and exanthemata, in which the general pyrexia is, as he contends, idiopathic, by the intervening order of phlegmasiæ, in which the fever is symptomatic; and of again returning to affections with symptomatic fever, in adding the hæmorrhagiæ and profluvia. We are inclined, on the whole, to prefer Dr W. Philip's arrangement to that of Dr Cullen, because it appears to associate diseases that are more analogous; but we are doubtful how far the principle on which it proceeds is perfectly accurate in its extended sense.

That the fever in the first and third orders of Dr Cullen's pyrexia is idiopathic, we believe to be true; except, indeed, the secondary fever which succeeds to some of the exanthemata. But there is more doubt whether the fever in the remaining three orders be entirely symptomatic. It is certain, that the fever in erysipelas, which Dr W. Philip has arranged among the phlegmasiæ, is not altogether symptomatic. Cynanche maligna, we are decidedly of opinion, is improperly arranged as a phlegmasia, otherwise it would also afford an unequivocal instance of a genus of this order, attended by a perfectly idiopathic fever. It is also doubtful whether the fever attendant on cynanche parotidea, be not in the first instance of the idiopathic kind.

But there is more doubt still respecting that general affection which attends the hæmorrhagiæ and profluvia. Dr W. Philip's definition of the hæmorrhagiæ is, "Febres symptomaticæ quibus est pro morbo locali, sanguinis profusio, absque vi externa." Now, that the general affection which attends the hæmorrhagiæ is merely symptomatic of the flow of blood, is by no means admissible; First, because the general affection *precedes* the flow of blood; secondly, because these two affections are not in proportion to each other; or if they be, it is an inverse proportion; and, thirdly, because the general febrile action is relieved, and often altogether removed, by the flow of blood. Now, these are the very circumstances which have induced Dr W. Philip to regard the general affection in the exanthemata as idiopathic; by parity of reasoning, therefore, the fever in the hæmorrhagiæ must be idiopathic also.

In epistaxis, hæmorrhois, menorrhagia, hæmatemesis, the general action precedes the flow of blood, by which it is usually entirely removed; it cannot therefore surely be considered as caused by it, for that would imply a contradiction.

With regard to hæmoptoe, it must be observed, that there is a febrile action, consequent on the hæmorrhagy, which is truly symptomatic; symptomatic not of the flow of blood, for this tends to cure the fever, and is an excellent remedy in hæmoptysis, but of the laceration and subsequent inflammation of the lungs. Thus it appears, that the disease becomes in reality a phlegmasia, before there is any symptomatic fever; and it would be as proper to esteem the flow of blood to be the immediate cause of the hectic in phthisis, following hæmoptysis, as of the fever which *succeeds* to the flow of blood in this disease.

According to our idea, therefore, febres are very aptly succeeded by the exanthemata; and, on the same analogy, the hæmorrhagiæ would be naturally arranged after the exanthemata. The hæmorrhagiæ would appear to conduct us gradually to those diseases in which the general fever is decidedly of the idiopathic kind.

We have an objection somewhat similar to the description of the profluvia. "Febres symptomaticæ quibus est pro morbo locali, excretio aucta, naturaliter non rubra." We do not understand how an increased excretion simply, can prove the cause and measure of a symptomatic fever; and, it is certain, that in the profluvia there is a more primary affection, which is at once the cause of the increased excretion, and of the fever. It is this primary affection, therefore, which ought, in strict propriety, to be considered as the local and idiopathic complaint.

The fever which attends the profluvia is, beyond controversy, partly symptomatic. There is, indeed, a fever which is a frequent attendant, and of an opposite and very depressing kind, which is not symptomatic. This, however, does not militate against our regarding the fever in the profluvia as symptomatic only; because that febrile affection to which we have alluded, is not a constant, but an occasional concomitant only, and such a disease must be considered an accidental compound of this fever, with the local and symptomatic affection essential to the profluvia.

There is some question concerning the nature of that general increased action, which attends the hæmorrhagiæ. And here we must observe a remarkable difference between the definitions of the genera of this order, and of those of the other genera in the class pyrexiæ of Dr Cullen. In these, the term pyrexia, or some equivalent expression, constantly occurs: the word pyrexia is repeated in the character of the order Febres; the term febris recurs in the characters of the two sections, intermittentes and continuæ; pyrexia in that of hectica. Some similar expression is used in defining the other four orders, and all the genera comprised in them, with the singular exception of the genera of the order hæmorrhagiæ. In the characters of these affections no term signifying pyrexia is employed; the word hæmorrhagia, which, from its definition, would imply pyrexia, is avoided; some other noun or verb, signifying merely a flow of blood, supplying its place.

This omission of the word pyrexia in the characters of the hæmorrhagiæ is altogether unaccountable. It cannot be supposed to be *implied*, because in that event, it would have been implied in the other orders and genera of the class pyrexiæ, also; and if it be intentionally omitted, the inference would be, that there is no pyrexia in the hæmorrhagic diseases; which is not only untrue, but would render the classification of the hæmorrhages, as a class of pyrexiæ, manifestly absurd. Hoffman remarks concerning the febrile action in the hæmorrhagiæ, "Probe consideratis phenomenis, et paullo pensiculatius subductis rationibus, sanguinis eruptiones iisdem propemodum, utut non satis completis motibus, quibus febres oriuntur, progignuntur."—However, it is certain, at least, that this affection is much allied to fever; and the point we have insisted on, is, not whether the general affection be a *complete* fever or no, but whether it be merely and entirely a symptomatic affection.

In concluding these remarks, we must observe, that the propriety of constituting catarrh and dysentery an order of disease, appears to us very questionable. We are of opinion, that this order might, both on the principles of the Synopsis Nosologiæ, and of the classification of Dr W. Philip, be altogether, and with great propriety and advantage, dispensed with.

Catarrh is nearly allied in nature, symptoms, cure, &c. to pulmonary inflammation; it is regarded as an inflammatory state of the mucous membrane of the fauces, trachea and bronchia *; what then can be the propriety or inducement in separating it from the other inflammations, and especially from an inflammation to which it is so strictly allied as pneumonia? It is sometimes so severe as to resemble pneumonic in-inflammation, or it may actually extend to the lungs; and the bronchitis of Dr Badham, or peripneumonia notha might very aptly form an intervening link. Under all these considerations, it is difficult to assign a sufficient reason why these diseases have been so unwarily separated.

With regard to dysentery, it is so analogous, in many respects, to inflammation of the bowels, in the chronic state, and especially to that species which is denominated erythematic, that it would very naturally coalesce with it in the same nosological division; and as it is undoubtedly often of an inflammatory nature, it is in all events to be arranged with the phlegmasiæ. On the principles of the Synopsis Nosologiæ, too, it might have been arranged with cholera and diarrhœa, to which it has no faint alliance, and is, with them, supposed to be equally conjoined with spasm.

We have reserved but little space for any comment on the other important points contained in these volumes. In the preface, Dr W. Philip states his opinion concerning the nature of fever, referring to the experiments on which it is founded, and leaving it, without comment, for the consideration of the reader.

" It appears from some experiments with the microscope, related in the introduction to the second part of this treatise, that inflammation arises from debility of the capillary vessels, and their consequent distention by the *vis a tergo;* and that we can at will produce inflammation by debilitating the capillaries, and relieve it by increasing their action. Wherever, therefore, the symptoms of inflammation, increased temperature, redness and swelling appear, the capillary vessels are debilitated and preternaturally distended. Now, in the hot stage of fever, the whole surface is affected with increased temperature, redness and swelling. That the capillary vessels of the surface are here in a state of debility, farther appears from the preceding symptoms, those of the cold stage, in which, the debilitated vessels not yet being distended by the *vis a tergo*, the surface is pale and shrunk. We can have no doubt that the same state of the vessels, which we observe in the external surface, obtains in the various internal surfaces, which is indicated by the same diminution or loss of the secreting power in them, and, as far as we can see, the same shrinking in the cold, and fulness and redness in the hot stage; and as the debility of the capillaries of a part, as appears from direct observation, always produces increased action of the larger arteries of the part, this general debility of the capillaries produces increased action of the whole arterial system. In inflammation, the debilitated vessels being comparatively few, the *vis a tergo* quickly and to a great degree distends them. In fever, the debilitated vessels being very numerous, it produces its effects more slowly, and to a less degree, in proportion as the resistance is greater. Fever and inflammation, therefore, seem only to differ in the one being a general, the other a local affection; to which all the differences in the phenomena of these diseases may, I believe, be easily traced."—Pref. p. viii.

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* See First Lines, § 1057.

From the additional practical observations in the present edition, we give an abstract concerning the administration of wine in fevers. The author observes, that

"The difference of opinion which prevails on this subject, has, in a great degree, arisen from physicians having attempted to apply their rules, either for or against it, to all cases indiscriminately. Whereas, it would appear that the use of wine in typhus must be almost as much regulated by circumstances, as that of blood-letting in synocha. Two general observations, however, appear to me to be warranted, that more or less wine is beneficial in all cases of typhus, and there are few, in which very large quantities are not injurious.—

"The proper quantity of wine is to be determined by an attention to the following circumstances.

"The degree of the debility, and the nature of the symptoms.

"The stage of the fever, and the time it has lasted.

"The nature of the cause which produced it.

"The age and constitution of the patient.

"His habits of living, and former diseases.

"The climate, season, and particular situation in which the disease appears.

"The effects of the wine.

"When the debility is inconsiderable, I believe the quantity of wine used in fevers should be very small, and it should be given diluted. In proportion as the debility is greater, we may cautiously increase the quantity, recollecting, however, that it is not our object suddenly to correct the symptoms of debility, much less to occasion any considerable degree of excitement, but to afford such support to the vital organs as shall tend to prevent an increase of debility; and, in more severe cases, to relieve the symptoms of immediate danger. Those cases of typhus which are accompanied with petechiæ, and a tendency to gangrene, seem to call most for the use of wine; and those in which the skin is soft and inclined to be damp bear it best.

"If very large quantities of wine are ever proper in fever, it appears to be when extreme debility comes on very rapidly. In the same degree of debility coming on more slowly, and consequently at a later period of the disease, there is less prospect of advantage from of a similar subject. We shall now extract some of the information contained in it. Dr T. arranges the cases of poisoning by nitric acid into four classes.

1. When the death is speedy, for it is never sudden. It commonly takes place from the primary effects in about twenty-four hours, varying from six to forty-eight hours.

2. When it proves fatal from its secondary effects, at various distances of time, from fifteen days to some years.

3. When death does not take place, but the recovery is imperfect.

4. When a perfect cure is sooner or later obtained.

The following example will give a tolerable idea of the progress of the symptoms in the first case.

A man, driven by distress to commit suicide, under the greatest agitation of mind, and upon an empty stomach, swallowed at a draught two ounces of concentrated nitric acid. Instantly he was seized with the most excruciating pains and agitation, and could not lie in bed, but rolled himself upon the floor. Vomiting came on, accompanied by a general sensation of coldness, especially in the extremities. Every time he vomited, the matter effervesced upon the pavement. He got a solution of soap and oil. In two hours he was brought to the hospital; and upon the road, he frequently vomited and stopped to drink. On his arrival, he got emollient drinks, especially linseed tea, in great abundance. He was in continual agitation, and his countenance very much altered. He vomited every instant a blackish glairy matter. He opened his mouth easily, and his tongue was white, with a tinge of yellow. He had acute pains in his mouth, along the œsophagus, and in his stomach. His belly, slightly tense, could not bear the slightest pressure, it so excessively augmented his pains. The surface of his body was cold; his pulse small, concentrated, and frequent; he had hiccup, and his respiration was laborious.

His symptoms increased. He uttered sighs and lamentations. His limbs became icy; a cold sweat covered his whole body; his pulse was almost imperceptible; the pain was constant. Still he could rise and make continual and useless efforts to quench his thirst, and satisfy his urgent desire to make water and go to stool.

He continued in this state during the night. The matters vomited became more clear, and of a yellow colour. He at last made a few drops of urine. The shocking appearance of his body already resembled that of a corpse, but he retained his senses, and was speaking when he expired, nineteen hours after swallowing the acid.

The burning heat and pains which are commonly the immediate effects of nitric acid, when swallowed, present striking contrasts. In general, they are not in proportion to the quantity or strength of the acid swallowed. Often persons who have taken only a small dose, are seized with the most excruciating and dreadful pains, and some of those who have swallowed a great quantity, two or three ounces for example, have had scarcely any suffering, but remained very tranquil. In the first case, the patients either recover, or survive a long time. In the second, speedy death is almost always the consequence. Thus, a young man of twenty died in twenty hours, without any agitation or signs of acute pain. On opening the body, the highest degree of disorganization appeared, perforations of the stomach, and great effusion of its contents into the abdomen.

A woman said she had taken nitric acid, but she seemed so little affected by it, that many thought she was imposing on them. There was no agitation, no pains or vomiting, but the smallness of the pulse, lassitude and prostration of strength, rather indicated a typhus fever. Next day she died; and, on examining the body, there was found the greatest degree of disorganization nitric acid is capable of producing, perforation of stomach, gangrenous spots, effusion into the abdomen, marked corrosion of all the viscera, general yellow colour.

But when the acid, from deficient quantity or strength, only acts on the mucous membranes, then it does not always prove fatal; but the pains are excessive, the colic dreadful. In the one case, the sensibility seems to be annhilated: in the other, excited in the highest degree. Here, as on many other occasions, the pain is to a certain degree proportionate to the severity of the affection, but after a certain point it seems rather to be in an inverse ratio.

In 56 cases, death from the primary effects took place in 19.

The second variety of the progress and termination of poisoning by nitric acid, exhibits, at first, the same phenomena as the preceding. But less alarming symptoms succeed by degrees. Anxiety, irregular fever, dryness of the skin, spasmodic constriction of the extremities, wandering vague pains, deep and difficult inspirations, dryness of the tongue and throat, excessive thirst, deep pain in the region of the stomach, habitual tension of the abdomen, obstinate costiveness, vomiting less frequent, a kind of copious salivation, uneasiness in the throat from the imperfect detachment of the flakes of the membrane lining it, portions of it still partially adhering, frequently floating in the pharynx, and disturbing both respiration and deglutition.

The pulse is often miserable, and the slow fever has no remission; the cold continues over the surface of the body, and there are irregular fits of shivering occasionally. Every kind of food, solid or liquid, is vomited. Milk alone seems to agree with the stomach. After some time, the inner membrane of the alimentary canal detaches itself in portions, which are discharged by vomiting, with floods of frothy and intolerably fetid saliva. Membranous flakes, swelled, rotten, and often of a very great size, are frequently pulled out of the mouth. This state lasts, in some cases, only about a fortnight, generally several months, and occasionally for years. But these persons uniformly fall into complete marasmus. Digestion is totally deranged. The stomach can bear no kind of food. All the functions languish.

The constipation increases to such a degree, that whole months pass without a single alvine evacuation. These invalids will go to the close-stool twenty times a day, to satisfy their urgent desire to have a stool, and, in the course of three months, only pass once or twice small masses of feculent matter, formed like pills, of a few grains in weight. Injections are of no use, but are frequently retained, and sometimes do harm.

Instead of amending, their situation grows daily worse. Insupportable to themselves, inconstant and impatient, they seek in vain for relief. Emaciated in the greatest degree, they resemble walking skeletons. Their whole appearance is revolting, spitting every instant, vomiting continually, or their lips and chin covered with filthy putrid saliva. It is difficult to conceive, how the exfoliation of the œsophagus and stomach can furnish such a quantity of eschars as are discharged by vomiting, and in some few cases by stool during whole months. Nothing can exceed the intolerable fetor of these putrified membranous flakes. Sometimes when discharged by the mouth in small quantity, they form portions of hollow cylinders, detached from the entire circumference of a part or the whole of the œsophagus, and in some rare cases, where the whole internal membrane of the œsophagus and stomach has been but slightly and uniformly affected, the whole exfoliates at once, and even in a single piece, threatening instant suffocation. Digestion being completely suspended, the system seems to live upon itself, as if the organ of secondary importance to life were absorbed, to nourish those indispensable to its continuance.

The muscles are considerably reduced in bulk; the cellular membrane is everywhere sunk; the adipose system entirely disappears, and the integuments are glued upon the bones, exhibiting their rudest forms. The skin becomes dry, scaly, and almost dead and inert, as in extreme old age. The physical faculties are extinct, and the moral faculties are singularly decayed. There remains only their shadow, as it were. The r

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vages, which, in the course of nature, ought to be the progressive effects of many years, are completed in a few months. Every thing in these individuals, presents the picture of accidental and premature old age. The individual still lives, but is only separated by an imperceptible interval from death, which encroaches daily upon the province of life. A certain activity of the animal life still remains, when the organic, remarkably reduced and decayed, is just about to cease.

This variety of the progress and termination of the disease, induced by swallowing nitrous acid, is not uncommon. It took place in 7 of the 29 cases now first described by Dr Tartra; and he accounts plausibly enough for its having been seldom observed before, by supposing, that when persons who had swallowed nitric acid had got the better of the primary symptoms, they were lost sight of, and the subsequent affection was not imputed to the proper cause.

Such in general is the progress when the patients die of the secondary symptoms; but in the case of a female it was considerably different, as well as the appearances on dissection. The constipation was not very great; the expectoration did not last long, and the vomiting was rare; but a fixed pain at the bottom of the thorax, accompanied by difficulty of breathing, and spitting of blood, deceived the medical attendants, who were not acquainted with the fact of her having drunk nitrous acid. She was treated as if for pectoral complaints, and died in about 60 days after swallowing the poison.

In this case alone, the body was not remarkably emaciated. The stomach was only a little contracted, and adhered in several places, especially to the liver and spleen. It contained a mass of solid blood of a dark red colour, the size of a fist, moulded to the shape of the stomach, and covered by a very fine membrane, which seemed to be either the mucous membrane detached from the stomach in several places, or perhaps a membrane of new formation. The intestinal canal, in this case, was of the usual size. Death seemed to have taken place before the gradual consumption had wasted the body.

The third variety of termination is in imperfect recovery. This is also very frequent, and is characterized by the same train of symptoms with what we have now described, but very inferior in degree. The exfoliation of the œsophagus and stomach, either takes place but once, or only a few times. A slow and progressive amendment ensures the safety of the patient. But there still remains some complaint; obscure pains in the throat, and especially in the epigastric region; habitual constipation, occasional vomiting, and increased sensibility of the stomach, so that

that organ can only support light nourishment and bland liquors. In short, they continue invalids during the rest of their lives; they are subject to repeated and even habitual indispositions, and sometimes to pain and insupportable heat of the stomach. But they are able to follow their occupations, and long survive their poisoning.

Dr Tartra has met with eight examples of this termination of the disease, in 56 cases.

The total disappearance of the symptoms produced by swallowing nitric acid, or complete and absolute recovery without leaving any consequences, is the last variety of termination.

Of 56 cases, the recovery seemed to be complete in 21.

When the patients die of the primary effects of nitric acid, the external appearance of the body presents no alteration; every part is sound and natural, and presents in a certain degree the firmness and freshness of life. The epidermis of the margins of the lips has commonly an orange colour, more or less deep. It seems burnt, and separates very easily. Sometimes yellow spots are discovered on the hands and other parts of the body, caused by the contact of nitrous acid. A yellow fluid, in some cases very abundant, flows from the mouth and nostrils, and the belly is considerably distended with air.

The alimentary canal is remarkably affected. All the internal membrane of the mouth is burnt, and has sometimes a white colour, but more commonly yellow. It is separate in some places, and adheres in others. The teeth are often loose, and have a very marked yellow colour at their crown. The mucous membrane of the pharynx exhibits the same change, or is in a state of inflammation of a dirty red colour. The whole extent of the œsophagus is lined with a dense mass of a fine yellow colour, dry on its surface, unctuous and greasy to the touch, and which seems to be formed both of the mucous membrane, altered in a particular manner, and of the albumen contained in the viscid fluid which exudes from the membrane of the œsophagus, solidified by the nitrous acid. This lining adheres in very few points, and is easily detached from the other membranes of the œsophagus, which are brown and blood-shot.

When the stomach is not perforated, it has commonly a considerable size. Externally its membranes are slightly and partially inflamed, but very much towards the pylorus and beginning of the duodenum. Its colour is faded, livid, of a yellowish green, with large gangrenous spots. It adheres everywhere to the neighbouring parts, the diaphragm, liver, spleen, and transverse arch of the colon, by means of a concrete lymphatic exudation. Its sides, which are thin and yellow in some places, and thick and black in others, exhibit net-works of dilated blood-vessels filled with black coagulated blood. Often there are several points of the stomach dissolved, and ready to burst with the slightest touch. It contains a great quantity of gas, which has a particular smell, resembling that of bitter almonds. Most commonly it also contains a great quantity of yellow matter, having the consistence of pap, in which there are flocculi, or small masses resembling tallow, which however may be the cheesy part of the milk drunk by the patient, decomposed in the stomach. Its sides are coated internally with a thick-grained paste, of a yellowish green colour, composed, according to all appearance, of the internal membrane, disorganised and dissolved, and of coagulated albumen. Almost always the substance of the stomach is swelled in some places, and deeply marked with black, without being dissolved. This effect is most remarkable at the great end, into which the acid seems to fall by its weight. The rugæ of the stomach are very brown, and are reduced to mucilage. They are easily removed by the finger from the nervous coat, which, by reason of its whiteness, often appears in a great measure sound. The small end is affected with many deep spots of gangrene, and the pylorus is much contracted.

The duodenum internally, especially at its two curvatures, presents the same kind of change as the stomach. Its sides, as well as those of the jejunum, are marked with yellow, slightly greenish. They are also lined with an orange very thick crust, and the villous membrane is dissolved and destroyed. These phenomena have less intensity in proportion as the part is more distant from the stomach.

The surface of all the abdominal viscera is commonly very much inflamed. The peritonæum is thickened, hard, of a dirty red, covered with albuminous layers, which unite, by numerous adhesions, all the viscera, and especially the folds of the intestines, as it were into a single mass.

The thoracic surface of the diaphragm, and of the inferior lobes of the lungs, is covered with a very solid layer of albumen, of a whitish colour.

A bloody liquid is effused into the abdomen; there is also a small quantity in the chest.

The urinary bladder contains no urine, although the patients have not discharged any. The large intestines are usually filled with very hard feces.

In most cases where the stomach is perforated, its bulk is very small; in other respects it is the same. The holes commonly occur in the large and small extremities: their form is circular, and their edges thin and as if dissolved. We then find in the abdomen an enormous effusion of a thick yellow liquid, containing many white flocculi, and resembling the fluid with which the stomach is filled, when it is not perforated. The greatest distention always accompanies this state of the belly. The alteration and disorganization are carried to the highest degree. The surface of the abdominal viscera seems to have suffered the direct action of very dilute nitric acid. It is greasy and unctuous to the touch, and almost everywhere spotted with yellow.

The appearances upon dissection of those who die of the secondary effects, are entirely different from those now described. It would be difficult to find an example of greater emaciation, more advanced consumption, or disgusting form. Nothing is equal to the degree of withering, drying up and decrepitude of the whole organs. Their colour is faded; the internal cavities do not contain the usual serum; the cellular and muscular systems are almost annihilated; the bones become dry, as in persons of advanced age, and break with wonderful facility. But these changes are general and secondary, and depend upon local organic derangement of the alimentary tube. The stomach and whole intestinal canal are contracted to an extremely small size, so that they could be contained in the hollow of the hand. The intestines are not larger than the little finger, sometimes not exceeding a thick writing-quill. Their coats are very thick, their cavity almost obliterated, and containing only a little mucosity. In general all the parts touched by the poison are contracted, and as if obliterated. The stomach, which often resembles a portion of a small intestine, appears sound externally, and only presents some adhesions to the diaphragm, liver, and spleen; internally the most remarkable change is, the contraction of the pylorus, the passage through which is not larger than a lentil, or even scarcely admits a probe; and the membranes of the stomach itself are so thickened and compacted around it, that they have lost all their natural suppleness. On the internal surface, there are irregular spots, or rather smooth and red places, which seem to be covered with a regenerated mucous membrane, less villous than that which has been destroyed by the action of the acid. These cicatrices are especially large and numerous in the great end of the stomach, and around the circumference of the pylorus. There are also commonly some at the cardia, as well as in the lower half, and even the whole of the œsophagus and pharynx. The adhesions of the stomach with the neighbouring parts are sometimes simple, but most commonly they are very remarkable. Viewed from the inside of the stomach, they form irregular circular depressions, where the whole thickness of the coats is evidently wanting, so that, in attempting to destroy these adhesions,

sions, we find that there are in fact so many holes through the substance of the stomach, which are plugged up by the adhesion of the neighbouring viscera.

As nitric acid, when swallowed, acts instantly upon the part with which it comes in contact, and continues to act for some hours, until the whole quantity swallowed has entered into combination with the membranes or contents of the stomach, there is a double indication of cure, modified according to circumstances.

The knowledge of the quantity of nitric acid taken, or the course of the symptoms, indicates nearly the point of the alimentary canal to which it may have penetrated; whether it has not passed the throat, or has reached the stomach; whether it has entirely disappeared, from the rapidity of its effects, and smallness of the quantity swallowed, as in cases where it has been taken by accident; or whether it still exists uncombined in the stomach, from the great quantity taken, as in cases of suicide.

According to circumstances, then, the indications are:

1. To moderate the progress of the poison, that is, to prevent the action of the uncombined portion.

2. To remedy its effects, or the changes produced by the portion which has already acted.

The first indication is fulfilled by two means,

1. By neutralizing substances.
2. By diluting fluids.

The first indication is extremely urgent. It requires, above all, the instant administration of antacids; and the inevitable delay in procuring these must be entirely devoted to the throwing in large quantities of diluting fluids. These weaken the causticity of the acid, which, at first, acting upon a few points of the stomach, is thus divided in a less violent degree over its whole surface, and besides, considered as emetics, in consequence of their great quantity, they contribute to the expulsion of part of the free acid.

The neutralizing substances are those which, combining with the free acid, change its nature and destroy its caustic qualities.

They may be given either in a solid or in a fluid form, and the most ready, convenient, and useful, are solutions of soap, weak solutions of alkali, and, above all, magnesia diffused through water.

The second indication is to be fulfilled by means of demulcents, emollients, and antiphlogistic remedies. Barley-water, whey, mucilage, milk diet, and emollient injections, are chiefly used, and all irritating and stimulating substances are carefully to be avoided.

VII.

VII.

Moyens de Remédier aux Poisons Végétaux, a ceux qui sont produits, par les Substances Métalliques, et au Venin des Animaux. Par B. G. Sage, de l'Institute de France, Fondateur et Directeur de la Premiere Ecole des Mines. 2de Edition. à Paris. pp. 88. 8vo. 1811.

The importance which M. Sage attaches to this little pamphlet induces us to notice it. Of the veteran mineralogist we would wish to speak with respect and with tenderness. Even were we more disposed to severity than we naturally are, the motives of the author, in leaving what he considered as a valuable legacy to the public, would be sufficient to disarm us.

"Approaching to the termination of my life, I did not wish to bury with me facts which might be useful in the preservation of my fellow-creatures, to whose instruction I have contributed by more than fifty years of public lectures; lectures which I still continue, notwithstanding my great age and my blindness, because I find no real happiness but in the cultivation of the sciences and of literature, which have assisted me to endure persecution, to support adversity, and to evade the evils of life."

But we hope, for the credit of science, that failure of intellect from old age, and the violence of the revolutionary period, have led him to mistake the cause of his misfortunes. When speaking of the means he employed to remedy the bad air of a dungeon, he says: "It was in this tomb of the living, that I began to lose my sight. I was buried in it for having demonstrated that a scientific doctrine was false and absurd. I was deprived of my appointments, and I only obtained my liberty and my life by paying a thousand guineas." !!!

Truth, however, obliges us to say, that, in the work of M. Sage, we have been greatly disappointed. It everywhere evinces the credulity, as well as the prejudices of its author. In all poisons he discovers an acid, or an alkaline acrimony, and, of course, the means of counteracting them, is the neutralizing of this by an antidote of an opposite quality. The only things worthy of notice, are the personal observations of M. Sage on the effects of different poisons.

When flour is spoiled, and its gluten decomposed, it loses the property of making bread, unless it be mixed with twice the quantity of good flour; but still it is so unwholesome, that it excites pustules and boils on the hands of those who work the dough.

The bread itself, when eaten, produces weight at the stomach, sickness (maux de coeur), disturbed sleep, the forerunner of inflammatory diseases, accompanied by violet spots on the ankles and legs, which exude a reddish sanies. M. Sage experienced these effects in his own person, and cured himself by an acidulated solution of nitre.

Soldiers, to preserve their rations in hot climates, sometimes dry them in smoke. Flesh dried in this way with mezereon bushes, caused such erosions in the mouth, stomach, and intestines of some of the French soldiers in Corsica who ate of it, that they all died quickly, in severe pain.

On the authority of a friend, M. Sage says, that the bad, and often fatal effects of eating clover, upon graminivorous animals, may be completely prevented by giving them ammonia, in the dose of fifteen drops to a sheep, and fifty to a bullock, in a glass of water.

A man who ate a pound of truffles to dinner, experienced a sense of weight at his stomach, and headache, succeeded by fainting, and death in the course of a few hours.

The aroma of fresh-gathered saffron is narcotic, and is said to produce asphyxia, and even death, in persons who have fallen asleep upon bags of that drug.

M. Sage believes volatile alkali to be a perfect specific for hydrophobia. In proof of this he quotes the case of a man, who, twenty days after being bitten by a mad cat, had his sleep disturbed by violent agitation, accompanied by delirium, and, when awake, had haggard eyes. Fifteen drops of volatile alkali, in a glass of water, made him sleep soundly, and ten drops daily for a week cured him! With such proofs, however, nobody will be satisfied; nor is the following much more conclusive. A girl who was dreadfully torn by a mad dog, got twelve drops of alkali twice a-day, for forty days, and was never affected; while a dog and a man, bitten half an hour afterwards by the same dog, were attacked with hydrophobia, the dog in fifteen days, and the man in forty-four;—on the evening of the second day of his illness he was seized with the most violent delirium, and died on the morning of the third.

The juice of the rhus toxicodendron produced enormous swellings on some labourers in the Jardin des Plantes, wherever it touched them. They were cured by acidulated baths and drinks. The juice of the *sapium*, produced violent pain and inflammation in the tongue and throat of a lady who accidentally applied her tongue to a leaf; and M. Aubert du Petit-Thouars had his face and scrotum covered with pustules, followed by desquamation of the cuticle, merely from having wounded the tree to procure the juice.

An infusion of arnica, which M. Sage was advised to take when he began to lose his sight, produced lethargy, lassitude, and coldness in the extremities, followed by total loss of sight, and periodic hemicrania, which yielded to cinchona.

M. Sage had an opportunity of witnessing the effects of the berries of the belladonna, on fourteen children belonging to a choir, who had eaten of them about five in the evening. Half an hour afterwards they felt uneasiness in the throat, and could not sup. They were put to bed. Some hours afterwards they became drunk and furious, leaping out of bed, running in the dormitory, and tearing the curtains. They could not swallow; the pupils of their eyes became immoveable, and they had a smiling countenance. The one who had eaten most freely experienced a singular agitation, accompanied by spasmodic twitchings, (soubresauts.) He remained insensible for thirty hours, during which he could not be made to swallow any thing without inducing violent convulsions. He discharged blood by the nose and anus, and vomited bloody and purulent matter. The third day he could swallow lemonade; and, on becoming calm, the whole roof of his mouth, his tonsils, and part of his tongue, were observed to be covered with aphthæ, filled with white pus. In eight days he was well. The other thirteen were cured in four days, by oxymel dissolved in barley water; but, on going to school, could neither read nor sing, some seeing red, others not at all, and none being able to articulate any sound. Four or five days afterwards, however, they could resume their exercises.

M. Sage concludes his work with recommending vinegar as an antidote against the poisons of the rhus vernix, euphorbias, hemlock, arsenic, copper, antimony, and lead; and ammonia as a remedy for the sting of insects, the bite of the viper, and rabid animals, asphyxia, apoplexy, and scorching of the skin by fire.

PART

PART III.

MEDICAL INTELLIGENCE.

Report of Diseases treated at the PUBLIC DISPENSARY, (near Carey-Street,) London, from Feb. 28th to May 31st 1813.

ACUTE DISEASES.

	No. of Cases.		No. of Cases.
Febris	10	Cholera	1
Febris infantum remit.	17	Dysenteria	12
Apoplexia	1	Peritonitis	2
Hydrocephalus	1	Rheum. acutus	7
Epistaxis	2	Rubeola	8
Cynanche tonsil.	6	Variola	2
——— parotidea	1	Varicella	1
Catarrhus	90	Erysipelas	2
Pertussis	13	Herpes zoster	4
Peripneumonia	1	Abortus	3
Carditis post rheumatismam	1		

CHRONIC DISEASES.

	No. of Cases.		No. of Cases.
Vertigo	7	Cancer ventriculi	1
Cephalæa	30	Hepatalgia	5
Hemicrania	6	Icterus	3
Surditas	2	Diarrhœa	18
Cynanche chron.	3	Hæmorrhagia intestin.	1
Asthma	1	Enterodynia	16
Catarrhus chron.	43	Lumbricus	1
Hæmoptysis	18	Hæmorrhois	3
Phthisis	37	Marasmus	12
Palpitatio	5	Nephralgia	11
Dysphagia	1	Enuresis	1
Dyspepsia	27	Hysteralgia	4
Gastrodynia	15	Amenorrhœa	6
Pyrosis	3	Menorrhagia	12
Hæmatemesis	2	Leucorrhœa	13

CHRONIC

Chronic Diseases continued.

	No. of Cases.		No. of Cases.
Prolapsus uteri	1	Struma	2
Rheumatismus chron.	34	Lichen	2
Lumbago et Sciatica	6	Porrigo	4
Pleurodyne	4	Lepra	1
Asthenia	17	Psoriasis	4
Epilepsia	2	Intertrigo	2
Hysteria	5	Urticaria	2
Chorea	1	Purpura	1
Paralysis	4	Impetigo	4
Tympanites	1	Porrigo	16
Anasarca	4	Erythema	1
Hydrothorax	2	Scabies	17
Ascites	1	Rupia	1
Hydrops tot. corp.	4	Aphthæ	2
——— post Scarlatinam	1		

The spring is, on the whole, late; the temperature having been generally low, though variable. A considerable series of dry weather occurred during the latter part of March, and in April; but the early portion of March was cold and stormy. In April a short interval of genial warmth took place, which was followed by cold and frequent rains, during the month of May, with occasional hail-storms and thunder.

The list of diseases does not afford any material occasion for comment. The number of pectoral complaints has been, as might be expected, very numerous, especially those of a phthisical character: Affections of the bowels, some of them connected with catarrh, and some with rheumatism, have also been frequent, and rather severe: and the measles have been, and continue to be, prevalent among children. On the whole, however, none of these diseases have assumed a very inflammatory type; few of the catarrhs were accompanied with much fever, and peripneumony appeared but in one instance. Among the small number of cases under the head, Febris, about one half were of a typhoid type; but they were entirely sporadic, and did not propagate themselves by contagion.

The case of chorea was somewhat singular. It occurred in a woman, past the middle age, (who is said to have been in previous good health,) in consequence of, or at least immediately subsequent to, a violent beating which she suffered from an intoxicated man. The convulsive and grotesque motions of the arms, and especially of the left arm, were perfectly characteristic of the disease; which was accompanied by a sallow complexion, considerable languor and debility, and lowness of spirits. She has not been materially relieved by free purgation, alternated and combined with tonics, nor by any other plan that has hitherto been adopted.

The diarrhœa originating from sympathy with the skin, when the patient has been exposed to the influence of cold, as it appears to be occasioned principally by a determination of fluids into the intestinal canal, or an over-excretion from the exhalents, may be in some instances safely and effectually restrained by anodynes and absorbents, combined with some aromatic substance. If there is the smallest degree of tenesmus, however, or any other feeling, which seems to indicate that the intestines do not fully eject their irritating contents, it is perhaps always adviseable to employ some gentle evacuant, previous to the use of opiates and astringents. There is great plausibility and simplicity in Dr Cullen's notion, that, where the bowels are thus spontaneously purged, the natural motion of the canal will be sufficient to evacuate its whole contents. But experience sanctions the ancient doctrine, which supposes, that the whole irritating cause is often not thus ejected. I am well persuaded, that common diarrhœa is frequently converted into a dysenteric form, more or less severe in degree, by such a practice. For by the retention of matters, which ought to pass off, irregular spasmodic actions of the muscular coat of the intestines are induced, which lock up still more effectually the cause of irritation. Repeated diarrhœa occurs as the influence of the medicine ceases, but is again checked by a repetition of the medicine, until at length rigors, and a febrile paroxysm ensue, and severe tenesmus, with slimy and bloody stools, mark the establishment of a true dysentery. Evacuants then become obviously necessary, from the instinctive urgings of the patient to rid himself of an incessant irritation. But, as I have often had occasion to remark in these Reports, when this state of the intestines has been induced, it becomes necessary to temper the acrimony of a purgative by the union of an opiate: the alternation of the purge and the anodyne is not nearly so effectual as the combination of the two. Eight of the twelve cases of dysentery, stated in the preceding list, were accompanied by considerable discharges of blood with the evacuations; but we have seldom found it requisite to repeat more than once the night-dose of calomel, with opium, or the extract of poppy, in order to suspend that hæmorrhagy; and the most violent cases of dysentery, so treated in the beginning, seldom assume the chronic form, or terminate in ulceration, or any other organic lesion of the bowels. The value of the combination can only be estimated by experience of its advantages. The supposition, that two opposite qualities of astringency and relaxation must reciprocally counteract and render each other inert, is found to be erroneous. The purgative acts indeed more tardily, but not less completely; so that all its good effects are obtained, without the irritation and debility, which it would otherwise occasion. In proportion, therefore, as the tendency to tenesmus is greater in every case of diarahœa, where the structure of the intestines is not actually injured, a laxative, conjoined with an opiate, may be administered with advantage. T. B.

Bloomsbury Square, May 31, 1813.

Dr Marshall Hall, Royal Infirmary Edinburgh, is preparing a practical work on the Physiognomy and Attitude of Patients, and on the Symptoms, Diagnosis, and Prognosis of Diseases.

The whole work is intended to bear on DIAGNOSIS as its principal and ultimate object.

Dr Robert Watt of Glasgow, will speedily publish a Treatise on the History, Nature and Treatment of Chincough; to which will be subjoined an Inquiry into the relative mortality of the Principal Diseases of Children in Glasgow, during the last thirty years.

Captain Laskey has in the press, a scientific Description of the Rarities in that magnificent Collection, the Hunterian Museum, now deposited at the College of Glasgow. It is intended to comprise the rare, curious, and valuable articles in every department of Art, Science, and Literature, contained in that great repository; including the anatomical preparations, which are unrivalled for number and importance. They were prepared by the joint and arduous labours of the celebrated Hewson, Cruikshanks, and Hunter.—This work may be expected to appear in July.

⁂ Communications may be addressed to the Editors, to the care of Messrs CONSTABLE & Co. Edinburgh; Messrs LONGMAN, HURST, REES, ORME, & BROWN, London; and GILBERT & HODGES, Dublin.

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PART I.

ORIGINAL COMMUNICATIONS.

I.

Case of Diseased Cervical Vertebræ terminating by Anchylosis. With Observations on the Treatment of Caries of the Spine; and an Outline of a Carriage, partly upon a new construction, for the use of patients labouring under that disease. By JOHN ARMSTRONG, M.D. Sunderland.

IT has been asserted by an author, whose zeal and labours I respect, that nothing remains for any future writer on the subject about to be discussed, but to give his sanction to the measures which Mr Pott suggested [*]. Without presuming to throw any additional light on this matter myself, it still seems to me partly involved in obscurity, and capable of further elucidation, particularly in what regards the treatment. My object in publishing the underwritten case and observations, is to shew the great efforts which nature frequently makes toward accomplishing the cure in caries of the spine, and, at the same time, to diminish the high confidence which the writings of Mr Pott

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[*] Practical Observations on the Disease of the Joints, commonly called White-swelling, &c. &c. By Bryan Crowther. London, printed for J. Callow. page 216.

and some other authors are calculated to inspire, respecting the efficacy of caustic issues in this disease; and if my scepticism on the latter part of the subject should appear to many of too decided a character, the best apology which I am able to offer at present, is, that it has not arisen from idle speculations, but has been impressed upon me by weighty facts.

JOHN CUMMINS, aged 11 years, was placed under my care on the 28th of July 1812. He was then extremely emaciated; had lost the use of the lower extremities and right arm; and possessed but a very slight command over the left, from the elbow downwards, just being able to raise the fore-arm feebly from the pillow, but not to grasp any thing in the hand. Though the muscles of the extremities were much wasted, they were neither loose nor flabby, like those of a truly paralytic limb; on the contrary, they felt tolerably firm, and there was considerable rigidity about the joints, particularly of the knees, so that much force was required to bend them, which, being effected, the heels were suddenly drawn to the buttocks. He complained of a fixed, and occasionally violent pain in the middle of his neck, which was always much aggravated by motion of the head or trunk in any direction. On examining the cervical vertebræ, the patient shrunk with a kind of agony when I pressed my fingers rather forcibly upon the bones; there was, however, no angular projection; but the neck seemed rather twisted towards the left side, and the head slightly inclined to the right shoulder. Here all the most material mischief existed, for the dorsal and lumbar vertebræ were apparently free from disease. The right external ear was one complete secreting surface; the glands, both of the right and left side of the neck, were enlarged and indurated. He passed his stools and urine involuntarily; the former of which were scanty, dark, and fetid. His abdomen was tense and swollen; his face pale, shrunk, and sharp; the edges of his eyelids tender and inflamed. The tongue was white, and covered with a kind of slime; and his appetite said to be keen and voracious; his pulse beat about 130 in the minute, and with more force than might have been expected from his general weakness and emaciation. He breathed in a hurried, feeble, and anxious manner; and now and then was troubled with a short dry cough. He had hectic heats and chills daily, became very feverish at nights, perspired more or less every morning, after which he obtained some short and unrefreshing sleep.

From the mother of this poor boy, the following particulars were collected respecting him. About the Christmas of 1809 he had the scarlet-fever, from which with great difficulty he recovered;

covered; and was left so much enfeebled, that nearly twenty weeks elapsed before he was able to walk out into the open air. He gradually, however, regained his strength, and, towards the close of the following year, went to attend the trap-doors in the coal mines. This employment required but little exertion, as he had, for the most part, either to sit or stand, and, at first, it seemed to produce no material change upon his health; but at the expiration of three or four months he became dull and sluggish, began to lose his flesh, and had no relish for his usual amusements, notwithstanding his appetite remained good, and he slept tolerably well. His parents, suspecting that the coldness and dampness of the mine occasioned this change, were anxious that he should leave his occupation; but as his father was then incapable of labouring for the support of the family, all their entreaties were unavailing. About this time he began to complain of the pain in his neck, which never left him, though he continued regularly at work until March 1812. In the end of the last mentioned month, weakness, numbness and partial loss of feeling were first noticed in his arms, which increased till the 5th of May following, when he was entirely deprived of the use of them, except the power of feebly raising the left forearm. On the 1st of May he was observed to trail his legs behind him, and he found himself quite incapable of walking five days afterwards. Ever since that period he has been in bed, and passed his stools and urine involuntarily, and daily become more emaciated, though his appetite has rather increased than diminished during his illness.

Not having much faith in the means commonly recommended in diseases of the spine, I determined not to order the application of caustics; still, however, I conceived that something might be done by way of assisting nature in her efforts to overcome the disease. His appetite was large, while his alvine evacuations were few and scanty; with the intention, therefore, of obtaining regular motions by the bowels, I directed that two, three, or four of the aloetic pills might be taken every night; and desired that his food might be light and nutritious, such as milk and hasty-pudding, small portions of fresh animal food, mutton-broth, and the like. All other directions that might have been given with a view of promoting an anchylosis of the diseased vertebræ of the neck, had fortunately been long anticipated by the care and watchfulness of his mother. Finding that motion gave him excessive pain in the neck, she had kept him almost constantly in the horizontal posture, though she daily cleaned his bed, changed his linen, and washed him with warm water. She was also particularly careful to have his room well ventilated, and, occasionally, when the weather was mild and dry, she carried him, placed horizontally upon pillows, into the open air, and sometimes laid him upon the grass, in a warm and sheltered place. All this was accomplished in so gentle a manner as not to occasion any increase of pain. Desiring that he might still be kept as much as possible in the horizontal position, I left my little patient, not without anxiety for his welfare. As he lived some miles distant from the place of my residence, I had not an opportunity of seeing him daily, but calling upon him occasionally in the course of the summer, had the pleasure of observing his gradual and progressive improvement. The pills were regularly continued, and produced two or three copious stools daily; his tongue became cleaner, his looks more animated, and the hectic considerably diminished; he slept better, and seldom complained of violent pain in his neck. About nine weeks after my first visit, he one day desired his mother to observe that he could move all his toes and fingers; nearly at the same time, he was now and then suddenly seized with severe pains and spasms in his limbs, and also started and talked much in his sleep. In less than a fortnight from this period, he recovered the use of both arms at once, and in two days more of the lower extremities, together with the power of retaining his stools and urine. He was able to walk pretty well with the assistance of crutches, which, in a few weeks, he entirely laid aside. In the end of November the sore of the right ear was healed, and the tumefied glands on the left side of the neck began rapidly to suppurate; and a spontaneous opening taking place, there was a pretty copious discharge of healthy pus for some time. When this natural drain ceased, a seton was cut in the neck, with the design of discussing the obstructions that still existed about the right parotid and neighbouring glands; this, however, seemed to produce no material benefit, and it was afterwards dried up. The purgative pills were persevered in some time longer, and the whole of the glandular obstructions at length disappeared. It may not be superfluous to remark, that before any of the glands began to suppurate, he had regained the motion of his limbs, and he walked to the dispensary to have the seton inserted in his neck.

This poor boy was seen occasionally during his illness by John Crondace, Esq. surgeon of this place, in passing with me through the village where he resided. In the course of his illness, he was also frequently visited by John Grimshaw, of Tatfield, Esq. who first recommended him to my notice, and by whose benevolent assistance his relations were enabled to procure him many comforts.

Several months have now elapsed since he regained the use of his limbs; and he has become so vigorous, that he can walk many miles without fatigue. He has occasionally called with his mother at my house, and has been examined by several of my medical acquaintance. He says he can bear as much, or even more exercise than he could before his illness, but finds his right arm not quite so strong as the left. His head is almost immoveably fixed to the spine, with a slight inclination to the right shoulder; and he is incapable of performing the nodding and rotatory motions, so that the whole trunk seems to be thrown into action whenever he attempts to move his head forward, backward, or sideways; from which it is evident that the first and second vertebræ, to say nothing of the rest, must have formed very close adhesions about their articulations. Realdus Columbus, the successor of the celebrated Vesalius in the school of Padua, notices the case of a man in whose body he discovered, on dissection, the first cervical vertebra firmly united to the occipital bone *.

In the first paper which Mr Pott published on caries of the spine, he states, that he had never seen the arms paralyzed by it, in whatever part situated†; and in his subsequent observations on the same subject, he mentions it as a rare occurrence‡. If I may be allowed to judge from my own limited experience, the upper extremities are generally affected when the cervical vertebræ become diseased. In the instance above described, they were affected some weeks before the lower extremities. In another part of his work, Mr Pott, I am persuaded, is not altogether accurate in asserting, that in naturally infirm children, the curvature of the dorsal vertebræ is always the first mark of the distemper§; for, if I mistake not, it often happens, in such subjects, that either the cervical or lumbar vertebræ are first attacked; and as, in examples of this kind, the bodies of the vertebræ may become carious without a visible projection, it is the more allowable to point out an incorrect and general assertion, proceeding from so high an authority in matters of this kind. The present, however, cannot be deemed a case exactly in point, notwithstanding it occurred in a naturally weak boy, and the cervical vertebræ were diseased without an incurvation from within outward; for I conceive that, in this patient, the caries was dependent, however remotely, on the scarlet fever. If scrofula be latent in the system, no complaint so generally makes it appear, in children especially, as the malignant scarlet fever, particularly if they be exposed

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* De Re Anatomica, Lib. xv. page 265.

† The chirurgical works of Percival Pott, F. R. S. in three volumes. London, printed for T. Lowndes, 1788. Vol. III. page 401.

‡ Pott, Vol. III. page 442. § Pott, Vol. III. page 404.

exposed to cold after their recovery, whilst in an enfeebled state, as happened in this instance. Many striking occurrences of this nature were presented to me about four years ago, when the scarlet fever prevailed to an alarming extent in Sunderland and the neighbourhood. No preventives against such consequences are equal to warm clothing, occasional purging, and tepid bathing.

The kind of palsy which afflicted John Cummins, if, with propriety, it may be so called, clearly indicated, that in him the disease was altogether spinal. In the true paralysis, depending upon an affection of the brain, the muscles are soft and flabby, and the joints loose and unresisting; in him the muscles were indeed shrunk, but at the same time firm and tense, by reason of which the knees had acquired considerable rigidity, so that when the legs were stretched out in a straight position, much force was requisite to bend them; the ankle-joints were stiff, and the toes strongly turned downwards, by an apparently spasmodic action, which circumstances are characteristic of diseased vertebræ *. The long-continued pain in the neck, the agony caused by motion and pressure on the cervical vertebræ, the palsy of the upper preceding that of the lower extremities, all point out the nature and precise seat of the disease. Nor can it be urged, in objection to this opinion, that there was no incurvation of the bones of the neck, since it often happens in caries of this part of the spine, and, as Mr Pott has himself observed, particularly of the lumbar vertebræ, that, in fact, there is no angular projection: the reason of which appears to be, that the spinous processes of the cervical are almost, and those of the lumbar vertebræ quite horizontal; whereas, the long overlapping spinous processes of the dorsal vertebræ have a considerable obliquity downwards, and, of course, are most liable to be forced outward, by the pressure and weight of the head and trunk, when the bodies of such vertebræ become carious and approximate, on account of the destruction of the intervening cartilages †. Lastly, the fixture of the head, in this case, and the immoveable state of all the cervical vertebræ, after the completion of the cure, leave no room for doubt upon the situation and species of the disease. Here, then, is a striking example of caries of the spine terminating favourably without issues, or drains of any kind; for it must be remembered, that the glands in the neck did not suppurate till after the boy regained the motion of his limbs, and that he walked a distance of

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* Pott, Vol. III. page 434, 435.

† Observations on Disease of the Hip-joint, &c. by the late Edward Ford, second edition. See a very sensible note on this part of the subject, page 242, 243, by Mr Copeland, the editor of that excellent work.

of several miles to have the seton inserted in his neck. If it be contended, that there was an almost perpetual drain of matter from the right ear, I answer, that this was so small, and so removed from the part affected, that it could have little, indeed no influence over the disease of the bones of the neck. Moreover, this discharge took place before he lost the use of his limbs, and therefore seemed to have no power in retarding, much less in arresting the progress of the complaint; in short, it was a mere secretion from the external ear, and no way concerned with the caries of the spine, except, perhaps, that it owed its origin to the same scrofulous taint of the constitution. The cure, then, of this case, was not effected by any drain, natural or artificial, but principally depended upon an effort of nature, by which, in all probability, the bodies of the bones affected were brought into mutual contact, and united firmly together, the morbid action being at the same time suspended. The aloetic pills, by keeping his bowels in a regular and rather lax state, perhaps indirectly assisted digestion and assimilation: at least their exhibition proves, that daily purgation may sometimes be used, when great emaciation exists, without prejudice, if not with advantage.

A review of the above case would certainly lead one to suppose, that rest in the horizontal posture of the body was really serviceable: and other examples of the kind have convinced me, that such a mode of treatment should generally be adopted, under similar circumstances, proper regard being paid to ventilation, cleanliness, tepid ablutions, and diet. We sometimes see children, with diseased spines, placed in an erect position, daily jolted in common carriages, or carried about in the arms of servants, without attention to the posture of their bodies; all which must necessarily tend to prevent the reunion of the separated parts, and materially impede the natural cure. The same, or similar objections may be extended to spinal machines, yet the ingenious Darwin has taken some pains to recommend them, and improve, as he supposed, their construction *. When the intervening cartilages of the vertebræ are destroyed, rest in the recumbent posture must be something like placing the ends of fractured bones opposite to each other, and retaining them in that situation. No doubt fresh air and motion would be highly desirable, by way of keeping up the vigour of the system, particularly if they both could be obtained at the same time, without agitation of the parts affected. For this purpose, an inner frame of a carriage is to be formed into a kind of crib, and hung upon jambles, like a ship's compass: the box which contains the card, represents this crib, or place, where the patient is to be laid horizontally upon a soft mattress,

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* Zoonomia, Vol. III. page 141, 142, third edition, 8vo, London, printed for J Johnson, 1801.

mattress, and the wooden case of the compass represents another and outer frame of the carriage, which is to be suspended in the ordinary way, by easy springs. For the sake of complete security, it is evident, that the centre of gravity of that part in which the patient is to recline, must be lower than its centre of motion, after the manner of the swing-cradle. The above is a mere outline; but I hope it is drawn with sufficient distinctness to enable a good mechanician to build a carriage of much easier motion than those upon the common construction *. Whether this machine at all resembles that contrived by Larrey, the French military surgeon, for the conveyance of wounded soldiers, I have yet to learn, being, at present, only partially acquainted with his writings, through the medium of the English journals.

When the spine shrinks either to the right or left side, without an incurvation from within outward, there is, as far as I have observed, very seldom any disease in the vertebræ themselves, such affections, generally speaking, depending upon relaxation of the ligaments and soft parts. In practice this is an useful consideration, as it may save many a poor child from the pain of caustics, which, in such cases, can surely answer no good purpose. And whether caustic issues have actually the power of curing caries of the spine, it may not be improper to inquire in this place.

During the prevalence of the humoral pathology, issues were held in high estimation. The celebrated Willis compares them to trenches, cut for draining fenny land, and declares, that there were scarcely any cachectical persons living in his day, but had their skins pierced in more places than a lamprey. For paralytic affections, from whatever cause originating, he recommends issues by cautery near the shoulder-blades, and seems to have been fully aware that such complaints occasionally proceeded from derangements of the spine, but evidently mistook luxation for caries. In another part of his work, he mentions more particularly the application of the cautery for diseases of the head. "For great effects," says he, "of the brain and its meninges, in infants and children, we cut an issue on the nape of the neck; to adult or aged persons, we apply a cautery on both sides the spine, betwixt the shoulder-blades, and there we often make two issues, capable of containing many peas, with great success †."

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* The hint of hanging a carriage, partly upon jambles, was given to me in conversation, by John Ness, Esq. of this place. Some time afterwards I mentioned it to John Grimshaw, Esq. an ingenious mechanician, who thought, with me, that the hint was an excellent one, and who kindly assisted me in making the above brief outline.

† The London Practice of Physic; being the Practical part of Physic contained in the Works of the famous Dr Willis. With the allowance of the College of Physicians. London, printed for T. Basset, 1692, page 210.

The similarity of this treatment to that afterwards adopted by Mr Pott, in palsy of the lower limbs from caries of the spine, is rather striking, though Mr Pott appears to have been unacquainted with the writings of Willis, and derived the hint of his favourite treatment, partly from Hippocrates. The practice of making issues declined, in a great measure, with the humoral pathology; and their use is now chiefly limited to scrofulous affections of the bones and their investing ligaments and membranes, in which, however, they are at present much recommended; and though they seem to have power over diseases of the larger joints, when used at an early period, yet, I conceive, that it still remains matter of dispute, whether they have any direct influence in checking the morbid action, when caries primarily attacks the bodies of bones themselves; and as the true scrofulous caries of the spine, in the first instance, preys upon the internal parts of the vertebræ *, while the surrounding ligaments are but often very little affected †, it is doubtful whether we have not generalized too much, and attributed effects to their application, in spinal distempers, which were chiefly brought about by natural operations.

Morbid dissection shews, that white-swelling of the larger joints commences in their articular investments, and is generally attended by a certain state of inflammation ‡; which, perhaps, accounts for the good effects of topical blood-letting in cases of this kind. It appears, however, that in the first stages of caries of the spine, there is no such increase of vascularity, and that the disease at once proceeds by an absorption of bone §: between these affections, therefore, probably some specific difference exists, greater than has been by some imagined. Be this as it may, I have, notwithstanding, witnessed beneficial results from local evacuations of blood by leeches or cupping, in the commencement and progress of caries of the spine, accompanied with violent pain, and conceive that this point deserves the consideration of future inquirers. In diseases of the hip and knee-joints, blisters, applied in rapid succession, have always seemed to me of more utility than issues by caustic; and I have had several opportunities of comparing their effects. An issue soon ceases materially to disturb the part wherein it is made; but repeated blisters keep up an almost perpetual counter-irritation, independently

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* A System of Operative Surgery, founded upon the basis of Anatomy. By Charles Bell. London, 1807. Vol II. p. 126, 127.

† Pott, Vol. III. p. 452.

‡ A Treatise on the Morbid Affections of the Knee-joint. By James Russell, F. R. S. Edinburgh, printed for W. Laing, 1802, p. 32, 33.

§ Charles Bell, Vol. II. p. 126, 127.

dependently of the discharge which they occasion. Impartiality, however, forces me to confess, that my faith has been completely shaken, both with regard to the one and the other, as efficient agents in the cure of caries of the spine; though, as far as I have remarked, blisters, successively applied, are more powerful in alleviating the pain with which it is usually accompanied.

The great energies of nature, says an eminent author, are known to us only by their effects.* And though those effects daily take place beneath the eye of the physician, they are often attributed by him to the exterior and artificial agents which he employs. Hence, the improvement of medical science has been retarded, more or less, from the earliest ages, by recommendations of innumerable specifics; and though each successive age has given ample comments on the errors of the past, yet, even at the present enlightened period, we find, that opinions concerning some remedies are as confidently delivered to the world as before, apparently supported by testimony and fact. Some of these opinions, no doubt, are well-founded; but the greater part will, in their turn, pass away, or only appear to succeeding philosophers as the memorials of credulity. That too great credit has been given to caustic issues, in organic diseases of the spine, I strongly suspect; and I trust that I may be allowed, without the charge of presumption, to state my own experience and observations on the subject, which, if I mistake not, will throw some doubt upon the efficacy of this practice. During the last six years I have seen a very great number of sick poor. Several of those who applied to me for scrofulous complaints, I found had laboured, at some former period, under affections of the spine, accompanied with palsy, for the most part of the lower limbs, from which they had slowly recovered, though, in all of them, incurvations of some of the vertebræ still remained, as marks of the previous disease. Now, Mr Pott has satisfactorily proved, that, whenever the curvature takes place from within outward, accompanied with an useless state of the lower extremities, the bodies of the vertebræ, forming the projection, have always been carious, at some period or other; consequently, all the patients I have mentioned must have laboured under this very affection of the vertebræ; yet by far the greater number of them got well without issues by caustics, setons, or any similar means, and the few who had been treated after the manner recommended by Pott, did not more speedily regain their health, nor, upon the whole, were they less deformed than those who had recovered by the efforts of nature alone. Amongst my medical friends of experience and intelligence, I find great difference of opinion upon this subject; some of them suppose that they have seen good effects from caustic issues; some doubt, and others entirely deny their efficacy. This discrepancy, at least, shews that the thing is not quite so certain as the writings of Mr Pott are calculated to make one believe. Speaking from my own personal observation, during a term of nine years, I have never seen issues by caustic of decided unequivocal benefit; and some men, whose experience has been much longer, and on whose judgment I can confidently rely, have been led to form similar conclusions. Mr Pott, however, states, in the most explicit terms, that the patients, whatever might be their age, whom he attended in the early part of the distemper, all got well; and conceives that the cure in all of them was effected by the discharge of the caustics, because, continues he, in many of them, no other means of any kind were used *. Now, without at all suspecting the accuracy of so justly respected a character as Mr Pott, I believe that few persons of great experience could be found in the united kingdom, whose practice has been equally fortunate in this line. In many instances I have myself seen this complaint anticipated, as it were, by the surgeon; caustics were applied, but they did not impede its advancement. Though, as a general proposition, it may be justly said, that the bones are slowly excited into disease, nevertheless, striking exceptions occur in highly scrofulous habits, in whom caries makes rapid and irresistible derangements of structure. When we reflect, too, that the distemper in question is decidedly scrofulous, and often accompanied with other constitutional complaints of the same nature; that it very frequently attacks the bodies of the vertebræ, or their anterior parts, and thus affects some of the contiguous internal viscera † in its very commencement; we shall not be much disposed to wonder at its progress, and even its fatal termination, under any mode of treatment, however early adopted. These circumstances being considered, I cannot but suppose, that the candid declaration of another late eminent surgeon, is far more agreeable to general experience. "Whoever thinks that, in every case of incurvated spine from caries, he shall succeed by the most judicious application of the caustic, will find himself disappointed ‡." Besides, Mr Pott, in the passage already quoted, entirely overlooks those efforts of nature, which, in many cases, complete the cure without the interference of art, and which are strikingly displayed in the most extensive affections, as the following extract will tend to illustrate, better than any thing I could advance of my own upon

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* Paley's Natural Theology, p. 447, the eighth edition. London, 1804.

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* Pott, Vol. III. p. 423, 424. † Ford, p. 245, 246. ‡ Ford, p. 245.

upon the subject: "In this case, there were ten diseased vertebræ, between all of which the invertebral substance was totally destroyed. Several of these were partially or completely united by anchylosis; others had suffered more considerably from the caries, great part of their substance seeming to have been absorbed, as no sensible exfoliation had taken place during the life of the patient. These bones are in some measure loose and detached from each other, yet, from their roughness, and the ragged appearance of points shooting out from some part of their surfaces, it is clear that the efforts of nature were strongly exerted towards forming the same union which had evidently taken place in others; and this would probably have been effected, had it not been for circumstances which attended the management of the disease. The patient was a tender and emaciated infant, living in a close and damp place, very unfavourable for a recovery from a strumous disease. He was frequently moved and taken up from the bed; yet, notwithstanding this treatment, he lived a considerable time, and at last died of the small-pox. When he was five years of age, he was admitted at the Westminster General Dispensary, in March 1789, for a carious incurvation of the spine. It was observed, that the disease had not the usual angular incurvation, which appears when a few only of the vertebræ are affected, for the whole spine was bent in the form of a bow. Issues by caustics were made near the most projecting part of the spine, but they were of no use. An abscess formed, which burst during the month of June following, and continued discharging till November, when he died of the small-pox. The disease in his back did not seem to have had any influence in the fatal termination of the variolous infection. The appearance of this disease naturally gives rise to a few reflections on the treatment of the carious spine. It exhibits an unfortunate proof of the difficulty of curing this complaint by means of art, and, at the same time, affords the consolation of shewing the great efforts which nature is capable of making towards the re-union of parts separated by disease *."

The length of time that issues require to be kept open, renders their effects extremely doubtful, Mr Pott himself declaring, that nothing is more uncertain than the time requisite for their effecting the cure in this disease: that he has seen it completed in two or three months, and known it require two years, two thirds of which time passed before there was any visible amendment †. Now,

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* Ford, page 241, 242, 243, 244. See also a most excellent plate at the end of the work, illustrative of the above case.

† Pott, Vol. III. p. 459.

Now, when so much time generally elapses before any material change occurs, must it not be difficult to determine with precision, whether nature or art has contributed most to the cure? Had caustics been applied in the case of Cummins, it is not impossible but that I might have been greatly deceived, and ascribed powers to them which entirely belonged to nature. All the circumstances attending the cure, in cases of diseased vertebræ, must be marked with more care and discrimination than they have hitherto been by practical writers, before their conclusions, respecting caustic issues, can be fairly established.

If caustic issues be at all efficacious in this disease, surely it is only by indirectly assisting the natural curative process, whatever may be their mode of operation; whether it consists in exciting some degree of counter-irritation in the parts adjacent, or, as the judicious Ford supposes, in checking an external suppuration from the progress of the caries. They cannot, I conceive, directly control the morbid action itself; and it will be allowed, on all hands, that the great work of repairing the disorganized parts, must be performed by very different instruments.

Scrofula, cancer, syphilis, and scurvy, are the ordinary causes of rottenness of the bones in general; and though Van Swieten relates, in his Commentaries, that he has known the cervical vertebræ affected by lues, it is, I believe, a rare occurrence; caries of the spine almost invariably deriving its origin from scrofula alone, which, together with the structure and constitution of the parts affected, render the disease the more inaccessible to art. For syphilis and scurvy, remedies have been found out which reach and arrest them wherever situated; but for the removal of any species of scrofula or cancer, such is the imperfection of our art, no means of the kind have yet been discovered; and in both the one and the other, when they assume a tangible form, the practitioner is left either to the use of the knife or topical applications, not being able to trust to medicines administered through the medium of the system. Notwithstanding these last considerations, and the acknowledged utility of caustics in some affections of the larger joints, still the evidence of facts that have already come before me, will continue to make me doubt, that they have in reality any decided influence over caries of the spine, unless future observations on the subject should afford very opposite inferences. So strong is the conviction of their inefficiency upon my mind at present, that if a child of my own were attacked with the complaint, most assuredly they should not be applied. Occasional cupping, repeated blisters, repose in the horizontal position, aperients, and a milk diet, should form the main part of my practice in the commencement;

and, if the distemper advanced under these measures, my hopes should finally rest upon those energies of nature, by which, perhaps, in every instance of the kind, the recovery is principally accomplished.

Wearmouth Walk, Sunderland,
June 28th 1813.

II.

An Account of the Dissection of the Body of a Child who died of Hydrocephalus, with Observations on the Case. By GEORGE EDWARD MALE, M. D. a Physician to the General Hospital near Birmingham.

THE subject of this case was a boy one year and nine months old. Symptoms of hydrocephalus were perceived two months after his birth, and his head had attained a very considerable morbid enlargement when I first saw him, which was about twelve months before his death. I gave him calomel in large and frequently repeated doses for several weeks; but no benefit being likely to result from it, and as he seemed to suffer no pain, the further use of medicine was relinquished, and at the same time all hope of his recovery. He died in March last, and Mr De Lys was so kind as to open the body for me the day after his death.

The limbs and trunk were greatly emaciated. The circumference of the head, from the forehead to the occiput transversely, measured 24⅛ inches; round the head, under the chin, 23½ inches; from the point of the chin round the head, 22 inches; the face, from the point of the chin to the eyebrows, measured 8¾ inches.

The parietes of the cranium were extremely thin, and the convolutions of the upper part of the cerebrum completely annihilated, and those of the lower very indistinct.

On opening the ventricles, a quantity of fluid, measuring *three quarts*, escaped. The substance of the brain was unusually soft, and the ventricles were enormously distended. A small quantity of purulent matter was observed about the fornix and anterior commissure of the brain, and most parts of that organ deviated so much from their natural appearance as to be scarcely recognized.

The abdomen was opened, but no marks of disease were observed, except a slight hardness and unusual dark colour of the liver.

The most remarkable circumstance attending this case is, that, notwithstanding the existence of so large a quantity of water in the head, (that the child could not bear its weight, nor raise it from the pillow,) strabismus never occurred at any period of the disease, nor any spasmodic affection, nor was the pulse ever slower than natural, but frequently quicker, accompanied by slight fever. Fatuity, which is the usual concomitant of the advanced stages of the disease, did not exist; on the contrary, the mental faculties were not in the least injured, and the child was as quick and sensible as children of that age generally are. The fecal discharges were under the control of the will. The appetite was variable, but generally good, though he always vomited greatest part of what he had eaten. I have never met with a case where the brain had sustained so much injury as the present; but one is recorded in the Medical and Chirurgical Transactions, Vol. III. which came under the observation of Sir Everard Home, in which the medulla oblongata, and a small medullary pulp behind the orbits, were the only parts of the brain which were found remaining.

III.

A Case of Malconformation of the Heart. By Mr Howship, Fellow of the Royal College of Surgeons in London.

The mother of several healthy children was, in January 1812, delivered of a female infant, apparently in good health. About a fortnight afterward, it was observed that there was something particular in the complexion and general appearance of the child, for the skin would frequently assume a dark purple or bluish colour.

The infant, however, sucked well; and though it was probable that its colour depended upon a peculiarity in the structure of the heart, or some of its vessels, yet there were no symptoms which indicated immediate danger of life.

During the first month, the child seemed to retain all other appearances of a healthy infant, but after this time its health began to suffer, although this took place by very slow degrees.

During the course of the second, third, and fourth months, the infant still sucked, always refusing every other nutriment, and there was a sensible diminution rather than any increase of strength. The child seemed unequal to the exertion of supporting the weight of its body, and, whenever placed erect, the tendency to the dusky colour of the lips and nails would speedily change to a dark blue. The most easy, and indeed the only comfortable position in which this child could remain, was that usual in suckling.

This child did not possess the strength which children usually have at that age; and any attempt at bodily exertion invariably produced the dark colour, a change always attended with a complete loss of the voluntary power.

Along with a loss of muscular power, there was a correspondent diminution in the general bulk of the body, the child very perceptibly losing its flesh, and finally becoming very much emaciated.

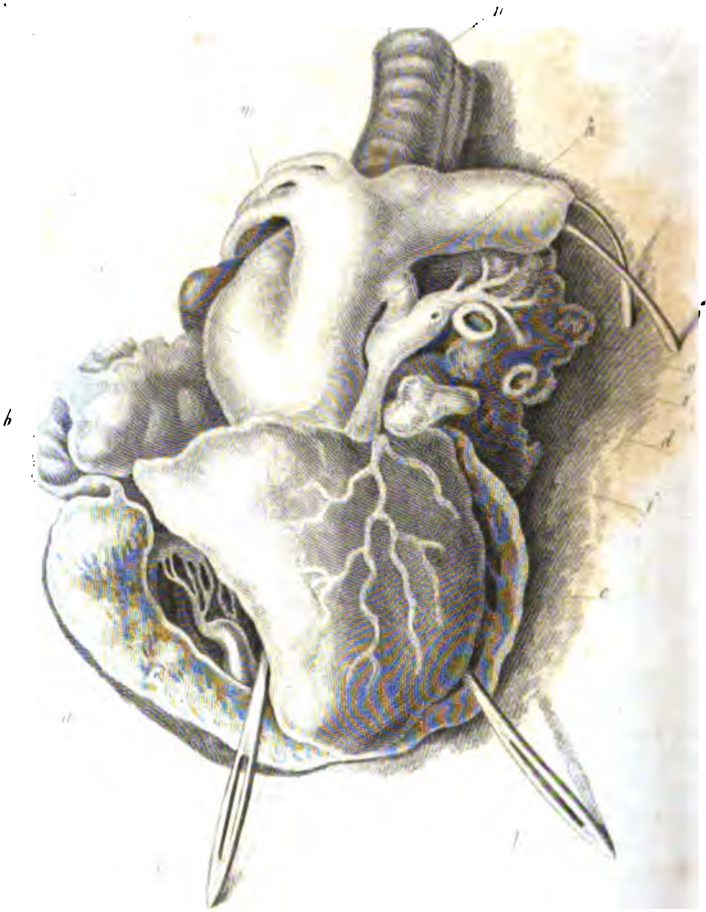
Any accidental disturbance to the regular action of the lungs was always attended with an alteration in the appearance of the skin; and whenever the child either cried, or coughed, the skin became darker in proportion to the degree of the exertion.

This child had just reached her fifth month, when the mother was disturbed, in the middle of the night, by the most violent screams. She supposed the child might have been frightened in her sleep, took her up, and endeavoured to comfort her; but between sleeping and waking, the fit of alternate screaming and crying continued for half an hour, during which time the colour of the body changed more than it had ever done formerly. The child after this became again composed, and had sleep before the morning.

The following day the colour of the body was considered to be lighter, and more of a natural complexion than ordinary, but the child was far from well, and did not breathe so freely as usual. The next night the screaming fit returned during sleep, but with a much greater degree of violence, threatening absolute suffocation. The infant, however, again recovered, although extremely exhausted. Subsequent to this attack the respiration did not return to its natural state, but was attended with an occasional sigh, as if arising from a degree of oppression about the chest. This oppression seemed to increase in urgency until the return of the hour at which on the preceding night she had been attacked; when, without the least apparent tendency to convulsion, she insensibly sunk, and very soon afterwards expired, although for some short time it was supposed that she was sleeping.

Dissection.—Upon raising the sternum, and opening the pericardium,

Malconformation of the Heart.



Drawn by J. Howship.

Engraved by [illegible]

Edinburgh Medical & Surgical Journal.

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dium, the heart appeared much larger than ordinary, and was most remarkably turgid with blood. The root and arch of the aorta also were very conspicuous, and apparently larger than usual. The pulmonary artery could not be seen *at all!!*

The heart was then removed from its situation, in order to its being more carefully examined. The pericardium was dissected away from the vessels of the heart, to detect, if possible, the pulmonary artery. After some time the pulmonary artery was discovered, but so much smaller, and at the same time its coats so much thinner than usual, that it was not without difficulty the artery was distinguished from the continuous surface of the pericardium reflected over it.

The ventricles of the heart being laid open, it was found that each of these cavities communicated with the aorta; but although the pulmonary artery arose in the ordinary manner from the basis of the heart, yet, upon introducing a probe, it was found to be impervious, and had no communication with the ventricle. This fact was more satisfactorily ascertained by introducing a probe from one of the pulmonary branches, through the artery towards the ventricle, and cutting down upon it. In this way the artery was laid open, and was found to terminate in a small ligamentous *cul de sac*, close upon the membrane lining the cavity of the ventricle.

The foramen ovale was only partially closed. The ductus anteriosus was open.

The dissection of this case will be further illustrated by a reference to the accompanying figure.

a. The cavity of the right ventricle, the muscular structure of which had all the characters of strength usually observed in the left side of the heart.

b. The right auricle laid open. This cavity was much enlarged, and contained a very unusual quantity of dark, coagulated blood.

c. The cavity of the left ventricle, the sides of which may be observed to have the thin walls belonging to the right side of the heart, instead of their natural thickness and strength.

d. The left auricle, exceedingly small, and almost incapable of transmitting blood.

e. The curvature of the aorta considerably enlarged. This artery arose from both ventricles, but was more particularly open towards the right. The vasa vasorum, when the preparation was taken from the body, were very numerous and beautiful, but this appearance was lost before the drawing was made.

f. The exceedingly thin origin of the pulmonary artery. At this part the coats of the vessel were not more than one-eighth part of their proper density and thickness.

g. The bifurcations of the pulmonary artery. The vessel is seen dividing into those branches that supply the left side of the lungs, and here the artery, although greatly contracted, had its usual density and natural appearance.

h. The ductus anteriosus, pretty thick, and quite pervious, admitting the probe with great ease to pass into any of the pulmonic branches.

i. Portions of the lungs, with the divided branches of the trachea.

k. A bent probe, passed by the right ventricle through the aorta.

l. A second probe, introduced through the same vessel, from the left ventricle.

m. The carotid and subclavian arteries.

n. The trachea and œsophagus.

For the opportunity of examining this curious state of the heart, I feel much pleasure in acknowledging my obligation to the polite attention of Dr Samuel Merriman.

Mill Street, Hanover-Square, March, 25, 1813.

IV.

Case of Concussion of the Brain, successfully treated. By Mr Archibald Robertson, Surgeon of his Majesty's frigate Cydnus.

William Howard, aged 18 years, while at work in the mizzen-rigging, on the afternoon of the 2d of August 1813, fell from the height of about twenty feet, on the deck below. I saw him on the spot where he had fallen; he bled plentifully at the mouth and nostrils, and lay in a state of utter insensibility.

He was instantly carried below, and I proceeded, with the utmost care, to examine the head, the upper and lower extremities, and the spine, in order to ascertain whether any fracture or dislocation of the bones existed. The only apparent injury, however, was a slight contusion on each knee, over the site of the patella. His pulse was slow and remarkably weak; pupil contracted; the stupor very profound, with spasmodic tremors and twitchings, and occasional vomiting of saliva, mixed with blood, which still continued to flow from his mouth and nose. The power of deglutition was quite gone.

A vein was instantly opened in the right arm, and 14 ounces of blood abstracted. More would have been taken, but his pulse sank sunk very rapidly, and became imperceptible at the wrist. The retching was increased, and a general coldness of the body supervened.

It deserves to be remarked, that, while the blood was flowing, he evinced several faint signs of returning sensibility, which, however, soon disappeared.

I shall here subjoin the progressive reports of his state, as they were taken from time to time.

Vespere, 10mâ horâ.—The stupor continues as profound as before, yet he swallows drink when it is applied to his lips; hæmorrhage from the nose and mouth has ceased; evinces sense of acute pain when pressure is made on the epigastric region; pulse 88, and rather sharp; face somewhat flushed; occasional retching still continues. Iterum aperiatur vena, et effluat sanguis. Capiat. pilul. calom. No. iii. (ana gr. ii.) et applic. naso et temporibus liq. volat. carbonat. ammoniæ pro stimulo.

August 3.—Only 10 ounces of blood could be obtained last night, as his pulse sunk rapidly when that quantity had flowed. Insensibility still continues, although he takes drink when offered him, and shews signs of feeling when the hartshorn is rubbed on his nose and temples. No stool from the cathartic pills; pulse 75 and weak; pupil contracted. Sumat quamprimum pulv. conv. jalapæ gr. xx. et calom. gr. iv. sub formâ boli.

Vespere, 10mâ horâ.—Continues in the same state; pulse 70, and rather weak; has yet taken nothing except cold water for drink; no stool from the cathartics; the carotids beat rather strongly. Repetatur venæsectio, et sumat pulv. convolv. jalap. gr. xx. c. pilul. calomelanos, No. iij. et imponatur emplastr. vesicator. fronti.

August 4.—Has had a very copious alvine evacuation during the night. Only 6 ounces of blood could be obtained last night; pulse 68, and feeble; blister on the forehead has risen well; remains in the profoundest stupor, but drinks water and swallows medicine when put into his mouth; has hitherto taken no nutriment. When it is attempted forcibly to rouze him, by shaking, he appears peevish as if in pain. Abradatur statim capillit. et lavetur caput aquâ frigidâ, et

℞ Pulv. convolv. jalap.
Pulv. rhabarb. ana gr. xv. M. fiat pulvis è vehiculo quovis porrigendus.

To have thin sago for diet.

Vespere, horâ 10mâ.—Has had no stool; still continues in a comatose state, from which it is most difficult to rouse him, and equally so to extort an answer to queries respecting his feelings. Sense of hearing is much impaired. Applic. emplastrum vesicator.

cator. ampl. tot. capiti, et sumat pilul. calomelanos No. iij. (ana gr. ij.)

August 5.—Blister on the head has produced a copious discharge; has yet had no stool since the morning of the 4th. The stupor is so materially relieved, that he is now able to give coherent answers, and has an indistinct recollection of the accident which has befallen him. There is slight mercurial fetor of the breath, with some soreness of the gums, but no ptyalism. Says he feels no pain of head, except what is occasioned by the blister. Pulse 66 and very feeble. Omitt. pil. calom. et capiat sulphatis sodæ ℥iss. ex aquâ.

Vespere, horâ 10mâ.—Has had one stool about an hour ago, and feels as if he would have more. Complains of slight strangury, no doubt in consequence of the two blisters. Has used some sago, and sat up two hours in the course of the day. Continue the sago.

August 6.—Has been freely purged during the night; symptoms of strangury nearly gone; mouth rather sore; pulse 68, and calm; is perfectly rational and composed; blistered parts of the head discharge freely; complains of nothing but debility. Omitt. omnia medicamina. To have sago for diet.

August 7.—Has had several stools; soreness of mouth much diminished; no strangury; appetite much improved; the only inconvenience resulting from the accident is debility.

August 10.—The patient is now in perfect health, appetite, and strength. In fact he would have been remitted to duty a day or two ago, but he has been kept in the sick-list until the hair on his scalp should be grown.

Remarks.

The above being a case of very considerable importance, I conceive a few remarks on its leading phenomena and treatment will not be deemed superfluous.

That the injury sustained by the brain was of the most aggravated and dangerous sort, is sufficiently testified by those tokens of *sympathy* shewn by the stomach and intestinal canal, as well as by the stupor of no less than sixty hours duration. The retching continued severe many hours after the accident; and such was the torpor of the bowels, that 40 grains of jalap, and 16 grains of calomel (given at different times,) produced only one evacuation, and that too not till after the lapse of 36 hours. It will be seen from the reports what further doses it required in order to excite any thing like free catharsis.

Of the precise nature of the injury done the brain, I pretend not to speak with certainty. The pathology of this organ, like its functions in the healthy state, is involved in much mystery. I have called it *concussion*, in conformity to the generally received professional nomenclature, yet I would not be understood to abide by the dogmas, or to adopt the theoretical distinctions which have been drawn by writers of systems of surgery, betwixt compression and concussion. Such writers appear to fancy that they understand the functions of the brain, both in health and disease, much more accurately than they really do. This false assumption is the corrupt leaven, which too often converts their reasonings, and their mode of treatment, into a mass of crudities. They fondly believe they can estimate the precise effects which external violence has produced upon the brain; and having gravely told you *this* symptom is *compression*, and *that*, *concussion*,—they proceed to lay down the mode of cure, with as much scrupulosity, as if the latent energies of the brain had been unveiled before them, and they had marked, with "microscopic eye," the morbid changes of its functions.

Yet a practitioner will often find himself obliged to set aside the tuition of books, and to believe the evidence of experience, and of his own senses, that there is really no distinction to be drawn betwixt compression and concussion; but that, bating for the variety produced by accident and circumstances, they are the same affection in sort, (if not in degree,) and require exactly the same mode of cure. The profession is deeply indebted to Mr Abernethy, for having, in his late publications, placed these important facts beyond all controversy, and thereby effected no mean improvement in the practice of surgery. To a mind constituted like that ingenious gentleman's, the general acknowledgment of his merit must be the dearest meed—the best reward.

It is almost needless to observe, that, in the above case, the general scope of treatment was purely antiphlogistic. The more active depletory means, as also the withholding of food from him for such a length of time, were the surest preventives of phrenitis.

Calomel was given and continued, not merely to open the bowels, but likewise with the view of producing absorption of any liquor that might have been extravasated upon, and compressing the brain; for I had begun to think the coma too profound, and too long-continued, to be the effect of mere stunning, or concussion, as it is called: besides, it is impossible to know, that the injury has not produced extravasation of blood, as well as what is generally stiled concussion, in the brain. I have seen the happiest effects result from the exhibition of calomel, in cases of extravasation on the brain from other causes. Blisters to the head were employed with the same intention, and appeared to have the most beneficial operation.

Cydnus, August 10, 1813.

V.

Observations on the extent to which the practice of abstracting Heat from the surface of the Body may be safely carried, as exemplified in its application to the Cure of Measles, by Mr MAGRATH, *Surgeon to the Mill Prison at Plymouth.* In a Letter to Dr DUNCAN, Junior, from Dr BATEMAN, Physician to the Public Dispensary, London.

THE importance of the practice of abstracting heat directly from the surface of the body, in febrile diseases, by means of cold water, is so obvious, that I presume no apology will be necessary for occupying a page or two of your Journal with a statement of some facts, which tend to elucidate the extent to which that practice may be safely carried. After having established the security and advantages of the cold affusion in simple fevers, Dr Currie himself proceeded, with his usual philosophic caution, to estimate its effects in the eruptive and complicated fevers; and it was soon determined, that, in scarlatina, the practice was equally or even more efficacious, than in common fever, and that the presence of the eruption was no bar to the employment of it; the notion of *repulsion* and its attendant dangers being a mere hypothetical bugbear. Among the unprejudiced, therefore, the cold-washing has now become a general practice in scarlet-fever; and to those who have witnessed the great and instantaneous relief which it confers, and which it alone is capable of conferring, in this fever, it is unnecessary to say any thing in recommendation of it.

There is another eruptive fever, however, in which, partly on account of the disposition to pulmonary affection which belongs to it, and partly of the smaller degree of cutaneous temperature, and of the apparently less tenacity with which that is retained, practitioners have been apprehensive that mischief might ensue from the external application of cold; I mean the measles. Some degree of this apprehension, I acknowledge I have always entertained, not from the tendency to pulmonary affections, (which my experience in the Fever Institution had evinced, is not aggravated by the proper application of cold,) but from the occasional retrocession of the eruption of the measles, which I had, though very rarely, witnessed; and from the relief, which the application of heat (by means of the warm bath), in restoring the favourable symptoms and the rash at the same time, had generally produced,

produced. I was, therefore, much interested by an account lately given to me in conversation, by my friend Dr Lockyer of Plymouth, of the success with which the cold affusion had been resorted to by a practitioner at that place, in the treatment of measles, in a large number of cases. Since his return to Plymouth, Dr Lockyer has kindly transmitted for my perusal, by permission of the surgeon, the official documents of these cases, and the result of the examination may be stated in few words.

Between the 14th of May and the 18th of June, 1812, *forty* adult men, French prisoners, were admitted into the hospital of the Mill-prison, at Plymouth, labouring under measles, under the care of Mr Magrath. The reports of the cases, which are made upon printed papers, and consist of only a word or two under the respective columns, do not of course convey very minute information: but the period of the eruption on admission is most commonly mentioned, and, in seven or eight of the cases, the concomitant symptoms, cough, sore-throat, pain of the chest, and in three of them, hæmoptysis, are noticed. In most of the patients, the cold washing was used, it is said, from the third to the sixth day of the eruption, that is, from the time of their admission until the heat subsided. Probably the period of the eruption has been misstated, by the patients, in some of these instances; for the sixth day of the eruption, would be the ninth or tenth of the disease, at which time the rash is nearly gone. Under all these circumstances, however, whether any pectoral symptoms were present or not, whether the eyes were inflamed, the throat was sore, or even spitting of blood had occurred, the cold water was invariably applied, and generally repeated during one or two successive days, while the symptoms continued urgent. No untoward result of any kind was noticed, and *all* the patients were discharged cured, in the second or third week. They were all kept on low diet, and purged by a saline cathartic.

Dr Lockyer adds, that the same practice has been employed in 148 cases of measles, among the prisoners at Dartmoor, and that all the patients, with the exception of five, speedily recovered.

As this evidence must be considered somewhat defective, I do not send you this statement, as affording the same satisfactory demonstration of the benefits of cold-washing in measles, as that which we possess relative to its influence in typhus, and scarlet-fever. It may be observed, indeed, that the measles are seldom fatal during the febrile stage; but, when death ensues, it is commonly in consequence of the pulmonary inflammation, and sometimes of the diarrhœa, that supervenes; so that there does not appear to be the same necessity for repressing the febrile excitement,

citement, in the measles, as in scarlatina: for the subsequent pulmonary or intestinal disease does not depend upon, or at least, is not proportionate to the violence of the eruptive fever; but seems to originate from peculiar irritability of constitution. The facts above stated, however, afford this decisive evidence, that, in adult persons, the rubeolous eruption is not easily repressed by the external application of cold, in the way of temporary but repeated washing,—that even the catarrhal symptoms, when present to a severe degree, are not aggravated by it, and that the recovery is not retarded after its employment.

A question then naturally occurs, is the apprehension, which is still in some measure entertained, even by those who are well assured of the safety of the cold affusion in scarlatina and other fevers, that the eruption of measles is peculiarly liable to repulsion by external cold, well founded? Or is it merely a portion of the dregs of the old prejudice, which has been so successfully exploded in respect to those other fevers? The facts above stated appear to be sufficient to settle the question with respect to adults; and as the laws of vitality are pretty uniform, and these facts tend to establish the universality of the principles pointed out by Dr Currie, by removing the chief exception that was supposed to remain against the general rule, we can have little doubt that the disease, in children, might be treated in a similar manner, and at all events, that the heating mode of treatment is essentially prejudicial in measles, as well as in scarlatina and small-pox.

But we are certain, that a retrocession or fading of the eruption does occasionally take place in children, labouring under the measles, and is accompanied by alarming symptoms, which are removed by the warm bath and cordials. Is it demonstrable, however, that such a change is always, or frequently the effect of cold, and not often the result of restlessness and watching, of overloaded stomach, or even of the exhaustion of an ill ventilated and heated room, either of which is capable of producing a temporary depression of the vital powers, sufficient to give rise to the phenomena? Or even admitting, that the application of cold has actually produced the retrocession in question; has it not probably been a continued application, when it ought only to have been temporary, or even when the state of cutaneous temperature would have contra-indicated the application altogether? From the abuse or mistaken use of any practice, it would be wrong to reason against the judicious employment of it.

I am the more desirous that the facts, communicated to me by Dr Lockyer, should be known, as I have, in a recent publication, expressed an opinion in stronger terms, perhaps, than these facts may seem to justify, that "Rubeola does not either require or bear the free application of cold, which is so speedy and potent a remedy for the most distressing symptoms of scarlatina;" although I contend for the propriety of coolness in the bed and apartment, and drink of the patient. If these remarks should meet the eye of Mr Magrath, or of the gentleman who superintends the same practice in Dartmoor prison, perhaps they will favour your readers, with a more minute statement of the circumstances, under which the treatment was directed, and of the obvious influence which it seemed to exert upon the progress of the disease; and especially whether it appeared to diminish the tendency to inflammatory affections, which so frequently supervene, and constitute the principal danger of the disease, or whether it actually mitigated the febrile action in any proportion to the mitigation which it produces in scarlatina. It would be interesting, likewise, to learn, under what circumstances death took place in the five patients at Dartmoor.

Bloomsbury Square, August 24th 1818.

VI.

A remarkable Case of Steatoma; to which is prefixed, a few Observations on Tumors in general. By W. Crane, Jun. M. D.

Tumors, arising in different parts of the body, from the variety of size, structure, and the symptoms they produce, excite the attention of every one engaged in medical pursuits. Some only create inconvenience from their weight and magnitude; others, although small, exhaust the powers of the miserable sufferer, by the continued pain and irritation they excite in the system. It is observed, that tumors become dangerous, from being in themselves malignant; from the situations in which they are placed, by obstructing the passages necessary to life; or by producing ulceration, and thus destroying the patient; for, as Mr J. Bell has observed, every tumor, howsoever indolent and void of pain, will have its period of ulceration.

With respect to their original formation, Mr Abernethy, in his essay on the classification of tumors, thinks that they generally arise from the deposition of the coagulable part of the blood, "which may be the effect of accident, or of a common inflammatory process, or it may be the consequence of some diseased action of the surrounding vessels, which may influence the organization and growth of the tumors." This was also the opinion of Mr Hunter, arising from what he had observed, on opening the abdomen of a subject, in which he found a recent coagulum of blood connected to the peritonæum, by an attachment of about half an inch in length. Mr Abernethy says, he has also a steatomatous tumor, taken from the peritonæum, that appeared to have been formed in the same manner. Although this may sometimes afford origin to tumors, I cannot avoid thinking, that they often arise from an increased action in the vessels near the part affected; for it appears to be the property of the vessels of a part, upon receiving an injury, either to put on an increased action, and form additional matter, the same as what they secrete when in a healthy state, or nearly resembling it, or to take on a new action, entirely different from their proper functions. As an example of the first, we have a beautiful illustration in a fractured bone; an increased quantity of osseous matter is poured out by the injured vessels, to reunite the fractured ends. Should, by any means, this increased action be continued, not only will a sufficient quantity be thrown out for this purpose, but an osseous tumor will be formed, sometimes of no inconsiderable magnitude. As an example of this, Mr J. Bell, in his principles of surgery, has given an engraving of one formed on the knee. Other examples might be brought forward, from what is observed in the vessels of serous, mucous membranes, &c. &c. As an example of the second kind, in which vessels take on an entirely new action, we may take the fungus hæmatodes; and osteosarcoma affords another, where the bone is converted into a substance resembling lard, or a fungous fleshy tumor arises, covered by a thin shell of bone. Dr Monro, jun. in his Outlines of Anatomy, has given an interesting case of this dreadful disease. Where the structure of a part is delicate or complicated, slight causes produce this altered action, as may be observed in diseases affecting glandular parts.

Hence I also think a classification of tumors might be attempted under the two following heads: *First*, those which arise from merely an increased action in the vessels of the part affected: *Second*, those in which vessels take on a new action, performing a function differing entirely from their natural and healthy action.

This will be found to differ from Mr Abernethy's, in the first order; as his only bears a relation, if strictly adhered to, to the second order. Or, if taken as applying to both kinds, I think comprehending them under one order can hardly be admitted, as it is placing very different actions of vessels in the same class.

These observations are founded on Mr Abernethy's definition of the word tumor, in his work already referred to.

Among those which may be ranked under the first class, and to which alone I shall restrict myself in this paper, is steatoma, or what Mr Abernethy calls adipose sarcoma. These frequently attain a most enormous bulk, and generally create more uneasiness from their magnitude, than pain. Their growth is sometimes rapid, but more frequently slow, continuing to augment in size many years. When ulceration takes place, it is in the mildest form, and the general health of the patient is not much affected. As they proceed slowly, and without producing any inflammation, they are loosely connected to the surrounding parts, and can easily be detached. They appear sometimes without any manifest cause, as is observed by Morgagni, de Sedibus et Causis Morborum. In his fiftieth letter, article twenty-third, he says, "Viro, nulla, quam sciret, prævia causa, in communibus alterius natis integumentis, exiguus apparuit tumor. Qui paulatim augescens, ad eam demum magnitudinem pervenerat, ut pueri caput, nisi superaret, at certe æquaret," &c. This tumor was extracted, and, being opened, was found chiefly to consist of fat. More frequently they appear to arise from the effect of injury, an example of which we have in Mr Abernethy's work, and, indeed, in all that have been written on this subject. The following case, which was communicated to me by my father, and which was the cause of my making the above observations on tumors in general, is perhaps as remarkable as any we have recorded.

Case.

"Rebecca Dawson, aged 44. She is rather thin, and somewhat emaciated; catamenia regular. About 22 years ago, she had an issue made on her left arm, soon after which she observed a tumor to appear in the part where the issue was made, to which cause she attributed the tumor. It has continued to increase in size, until it has attained a most enormous bulk; it being nearly three feet in length, and, at its widest part, nearly two in circumference. Soon after this, a second formed between the elbow and the wrist, which measures two feet in length. A third also was growing between the wrist and little finger, but has not attained any very considerable magnitude. The large tumors have the appearance of a pair of wallets half filled, thrown over the arm, from the shoulder to the wrist. They are beginning to ulcerate. The largest is fastened round her body by a bandage, and the second is contained in a bag or suspensary bandage, and supported on a table or in her lap; when in bed, it was laid on her stomach, which seemed to be much affected by its weight. The skin of the arm is much elongated by the weight of the tumors. Over the body and extremities there are an immense number of small tumors, from the size of a walnut to that of a small pea.

"At a consultation it was deemed necessary, from many circumstances, to remove the arm, an operation to which the patient readily consented, and even urged, although she was told the result might be unfavourable. The operation was performed, and every thing appeared to be going on well; but in the course of the night, after the arm was taken off, she died suddenly. The friends would not permit the body to be examined. The tumors on the arm were steatomatous; on cutting into them, they were found to contain in their centre an oily mucilaginous kind of matter; externally, they were hard, and somewhat resembled the udder of a round of beef."

W. Crane, M. D.
Physician to the Boston Dispensary, Lincolnshire.

The above case, I think, affords a good illustration of a diseased action of the adipose membrane arising from local injury, and then extending itself over the whole body.

VII.

Observations on some Remarks of Dr Bancroft, contained in the 7th Appendix to his Essay on the Disease called Yellow-Fever, &c. Addressed to Dr A. DUNCAN*, senior, of Edinburgh,* by Dr Chisholm of Bristol.

——————αλλα με πρωτον
εκ πολεμου ανιοντα, επει λιην εκοπωθην
ὕπνου δευομενον, ὀυκ ειασαν θορυβουντες,
ὀυδ' ολιγον καταμυσαι——

——————sed me nuper
Ex bello redeuntem, postquam valde fatigatus fui
Somno indigentem, non permiserunt tumultuantes
Neque parum oculos claudere.

Βατραχομυομαχια. l. 187.

My dear sir,

Observations on remarks which have a direct tendency to subvert the opinion of the contagious nature of the fatal pestilential fever which prevailed so generally in the West India Islands, and many parts of the United States of America, in 1793 1794, and 1795, an opinion formed on the most mature and close investigation on the spot, of the passing circumstances of that malady, are addressed to you with peculiar propriety, since it was chiefly in consequence of your request, and your inquiries relative to it, in November 1793, that I first determined on submitting to the public my sentiments on the subject.

The first intimation I received of Dr Bancroft's remarks on these sentiments, was the review of his "Essay on the Disease called Yellow-Fever, &c." in the 31st number of the Edinburgh Medical and Surgical Journal, p. 324,-344. Some time after the Essay itself reached me. The first impression the perusal of that part of it which relates to me made on my mind, was, I confess, an almost unconquerable sense of indignation; for I found it "as coarse in its language, as it is furious in its matter." But this was soon displaced by feelings of a different nature, when I perceived from this prominent specimen, that, to use the words of a celebrated political writer, "the opposition are reduced to the necessity of railing, because we do not choose to adopt their law, and, with their systematic good opinion of themselves, assure every body that differs from them, that they are a parcel of blockheads, and understand nothing of the matter." In the present instance, having met with nothing in the least capable of even shaking my opinion respecting the nature of the fever Dr Bancroft professes to treat of, I should not have deemed it, in the smallest degree, incumbent on me to repel so violent and unprovoked an attack, had I not seen in the Review I have referred to, much inclination to reject my statements, and to adopt those of Dr Bancroft. For, although I was persuaded this proceeded not from any inimical disposition towards me, but from the plausible construction of the author's sophistry; yet, being aware that no little weight might be attached to this criticism in the minds of those personally ignorant of the true merits of the subject, and cherishing a sincere and well-founded respect and esteem for the reviewers themselves, I determined to subdue my repugnance to examine Dr Bancroft's personal remarks, and to show how baseless their foundation is.

I have long ago been well convinced of the futility of all medical controversy; but, if such controversy is resorted to, there is one indispensable and obvious condition on which it should be conducted, however uncertain the result may be; and that is, that the arguments on both sides should be fairly stated, and a conclusion deduced from the liberal and candid examination of them. Has this condition been observed by Dr Bancroft? I think, I may be permitted to say, it evidently has not. On all occasions he makes use of no authorities but those which favour his own opinions; or if any others are adduced, it is for the purpose, not of candidly examining, but of grossly vilifying them. It is, therefore, amusing, when we find him thus affecting the language of candour: "Party zeal and prejudice often render men incapable of deriving any evidence or information from facts, but such as suit their own views and purposes." (p. 394.) This observation, it appears, has been suggested by the Doctor's animadversion on a letter from Dr Hosack of New York, to me, published in my letter to Dr Haygarth, p. 205.: but he forgets, that my Remarks on Dr Miller's Report, and the letter from Dr Hosack to me, remain unanswered, although more than four years have elapsed since the promulgation of them. Perhaps Dr Bancroft will dismiss this observation, by saying, an anwer is "superfluous;"—a very easy mode of extrication. But much as I take blame to myself for intemperance in my writings, on some provoking occasions, an intemperance, I will say, arising out of honest indignation at the scandalous illiberality of those who had excited that indignation, I nevertheless feel myself perfectly justified, in applying our Saviour's reproof of rash judges to Dr Bancroft: "Why beholdest thou the mote that is in thy brother's eye, but considerest not the beam that is in thine own eye: Thou hypocrite, first cast out the beam out of thine own eye, and then shalt thou see clearly to cast out the mote out of thy brother's eye." After a careful, and, as much as in me lay, a dispassionate perusal of Dr Bancroft's Essay, I place my hand upon my heart, and declare, I find nothing in it in the least capable of exciting contrition for what I have written, except, as I have already said, on the score of intemperance, which I sincerely wish had been avoided; nor, except in the instance of putrid animal matter generating infection, since the publication of my letter to Dr Haygarth, for retraction. My mind, on this, and every other subject connected with my profession, is conscious of its own rectitude of intention at least; nor has it ever willingly or designedly deviated from the path of truth. Like all other men, I have abundance of faults, and abundance of aberrations of judgment; but to commit, or to be accessary to the commission of imposture, or to the fabrication of facts, to mislead intentionally, to falsify truth, has never been a part of my character. Those who know me personally, and those who are acquainted with my writings, know, I trust, that it has ever been my wish and endeavour to be at peace with all men; and that it has ever been my earnest endeavour, too, to exert such faculties as God hath been pleased to endow me with, for the benefit of mankind. It is reasonable, therefore, that I should ask, Why am I thus furiously and grossly calumniated?—thus placed among the most execrable of men? Where is the right possessed by any man to act thus towards me?—An appeal to the justice of my country would shield me and expose the shameless slanderer,—and to that justice I most cheerfully and confidently appeal. The reader will, I trust, excuse this warmth: it proceeds from a mind deeply conscious of its own rectitude of motive, and indignant at the baseness of such unmerited calumny, which thus arrogantly sets forth charges the most repugnant to the feelings of a man of honour, and of the deepest interest to a professional man. This writer makes use of abundance of harsh expressions, which he designates by the more gentle epithets, "uncourteous and disobliging expressions;" and deals unsparingly in the rudest personalities.—And wherefore?—he condescendingly informs us,—because, as he alleges, (p. 716 note,) I have so often, and with very little reason, applied the harshest and most offensive language to others in my writings. But Dr Bancroft forgets that I have never addressed myself to him:—that I have never been the volunteer champion of any party:—that whatever I have advanced, has been advanced on my own observation and experience, and with the sole and humble hope of benefiting mankind; not with the fallacious view of maintaining the objects of controversy:—and that, however harsh and offensive my language may have been, and I readily and freely acknowledge the unfitness of the use of such, it has resulted from the most irritating and unsought provocation, and in no instance has it been personally applied; but most assuredly directed against the doctrine, not the author of that doctrine. My reply to the late Dr Smith of New York, contrasted with the highly offensive, unprovoked, and unfounded aspersions, with which that gentleman's paper on the malignant pestilential fever of Grenada abounds, must prove my forbearance; and, although I have betrayed much warmth in my examination of Dr Miller's Report, yet was there ample cause of irritation: For the aspersions of the former, the Editors of the Medical Repository made a sufficient apology; and to my examination of the latter, no answer whatever has appeared. Perhaps, indeed, Dr Bancroft assumes the office of their champion. He takes the same ground, and maintains it with the same arguments, proving himself a very λιμνοχαρις πολυφημος; for, whereas his predecessors urge their attack in a neat comprehensive form, he diffuses himself over 811 pages of paper, and intrenches himself in the several points of approach, with a host of irrelevant authorities. It is, indeed, to be regretted, that this industrious and indefatigable collector and compiler of facts of fevers of endemic origin, should have given himself such an infinitude of trouble, because it is unnecessary; for the result he proposes to draw from his multitudinous assemblage from all quarters of the globe, is fully and freely admitted, viz. that the yellow remittent fever, in all its grades, and in all countries where it appears, is the product of local causes, and perhaps universally of marsh miasmata. In fact, he has put himself to prodigious trouble, has bestowed immense labour, and has displayed a blaze of talent and erudition, to prove what has never been denied by intelligent and well-informed medical men. His volume, therefore, may, like the speculations of his predecessors, be considered as no more than a mere *petitio principii;* but, unlike them, he swells his lucubration into an unreasonable bulk; and, in this respect, the words of Sauvages, used in characterizing the labours of Schneider, are strictly applicable to him: "Immensa vero disputatio de horum verborum significatu integrum librum comprehendens, est opus hominis sua eruditione, suo otio abutentis." (Nos. Meth. I. 687.) And what, after all, is this laborious effort for?—to set aside what men of common sense must ever maintain. Let the man of common sense, whose intellect and perceptive faculties have not been tortured into an unnatural direction of thought or conception of things, listen to the outlines of a plain unvarnished detail of facts, and then let such a one decide; am I to bow and do reverence "to this new Haman?" for, like that proud and swelled minion of absolute power of old, Dr Bancroft, in almost the very same language, demands unlimited and universal submission. "All this, however, will not accomplish my undertaking, because there are persons, particularly Dr Chisholm, (Oh how I honour him for the distinction!) who admit, that yellow-fever, as it existed in the West Indies, previously to the year 1793, was derived from marsh miasmata, and destitute of contagion, but assert, that a *nova pestis,*" (a metaphor, designedly misconceived by Smith, Miller, and Bancroft,) "a peculiar, original, and foreign pestilence, recently generated, and utterly unknown before; endued with a new and distinct character, possessing new powers of devastation, and capable of propagating itself throughout the world, was introduced by the ship Hankey, into Grenada." (P. 283). Yes, this is my creed, this is my cause, the cause of truth, which, I trust, will be like that of the humble, but undaunted Mordecai. The friend of mankind, and of science, properly so called, will then exclaim, "the adversary and enemy is this wicked Haman."

Dr Bancroft dwells much on what he has been pleased to call "the inconsistencies" of my "peculiar opinions;" designating them "inconsistent, extravagant, and incredible notions;" and with a grace certainly his own, observing, "they only need to be stated and contrasted, in order to their being properly estimated." (p. 747.) In opposition to this, I lay before you the outlines I have alluded to. My own sentiments upon the disease which constitutes the subject of Dr Bancroft's volume, have been so often stated, considered, urged, reconsidered, defended, and, I think, established, in my essay, my reply to Dr E. H. Smith, (Med. Repos. Vol. II.) and my letter to Dr Haygarth; as well as in the writings of other physicians, particularly, the late most able and irresistible review of Dr Miller's Report, by Dr Hosack of New York, (Med. and Philos. Register, Vol. II.), that I should deem any additional discussion worse than "superfluous;" nay, I should be more inclined to take up Dr Bancroft's declamatory invective in an "absurd and ridiculous," to use his own favourite expressions, than in a serious view, were it not in consideration of the reviewers who have been so encomiastic in their remarks on this author. I shall, therefore, content myself with conveying to you, as far as I shall be able to consolidate the principal contravening positions to the statements of Dr Bancroft, a short, but comprehensive narrative of facts, which I shall further authenticate, by a few notices on Dr Bancroft's Essay, where its relevancy to the subject is direct and obvious; and, by subjoining to the whole, the unbiassed sentiments of a few of the principal gentlemen of Grenada, resident at St George's, Grenada, at the breaking out, and during the greatest prevalence of the malignant pestilential fever. And here I may observe, that every obscure disease requires time, much thought, and reiterated observation, for its elucidation; and that, in the progress of this important process, opinion must succeed and supersede opinion, till at length the disentanglement first, and afterwards the converging of the several facts relating to it, give a clear, decided, and permanent impression of the truth. This is an obvious, and, in some respects, certainly a trite remark; but, nevertheless, it seems to be a remark which has not occurred to Dr Bancroft's mind, otherwise we should deem it impossible he could not perceive, that, in the instance before us, a fluctuation of opinion, according with the varying and prevailing prejudices of men's minds, must have been the necessary consequence of the introduction of so unexpected a visitor as typhous infection, until a close and discriminative attention to the facts and circumstances which followed, and arose out of that event, established the truth of the existence of such infection. This close and discriminative attention rendered evident, that, notwithstanding the excessive and illiberal vehemence with which Dr Bancroft asserts the contrary, typhous does exist within the tropics, varying only from the same disease in other climates, in as much as a high temperature in the former, generates a peculiar modification of its specific nature, and, in many respects, of its symptoms;—and that the malignant pestilential, or what has been most improperly called "yellow-fever," (an impropriety, productive of all the mistakes, all the controversy, all the warmth of discussion, exhibited by the writers on the subject), was really and truly the typhous of temperate and cold climates, assuming a monstrous, a new, (I retain the expression,) and most destructive form, through the agency of a tropical climate; and that it is capable of assuming the same monstrous features, without losing, in the smallest degree, its specific nature, when united with marsh miasmata, in a high temperature, as happened at Demerary. (Letter to Dr Haygarth, prop. 4th.) The history of this fever, from its origin on board the Calypso, and the rejunction of that ship with the Hankey, to its appearance in the West Indies, and North America, and its most fatal prevalence in these countries, manifests the truth of this. These are the sentiments I have promulgated in my last publication on the malignant pestilential fever: sentiments which, with the exception only of vapours or exhalations, arising from animal matter, accumulated in a putrid state, the closest and most mature consideration of the subject I am capable of, has impressed indelibly on my mind. I beg your indulgence whilst I here transcribe them. "Remove the accumulated putrefaction, produce perfect ventilation, decompose the matter of infection, or purify the pestiferous fomites contained in the houses or chambers of the sick, and enforce this improvement or purification, by those stimuli which alone can act on unenlightened minds, pecuniary rewards, and you give health and comfort to those who have been bereft of both. The same causes, probably, give origin to the plague; and, in the case before us, the produce of such a state of circumstances is marked with a peculiar character, by the climate in which it takes place. In cold and temperate climates, we see a *simple* fever of infection, or typhous, is the consequence; within the tropics, there is superadded to the most malignant virus of typhous infection, many of the distinguishing features of the most violent yellow remittent fever, thus forming a monstrous compound, which hitherto has not found a place in any nosological arrangement. It is a disease, which, from this peculiar conformation, is defined with difficulty, and is distinguished by shades, which require the industry, the discernment, and the fidelity of a Claude Lorrain to delineate. *It is* *hence we so often meet with counterfeits, and with so many on whom the imposture has been too successfully practised;* and it is hence a *Libro di verita* of its history and portraiture is become so indispensably necessary. It is a disease, however, more obvious to the senses of the experienced, discerning, and unprejudiced observer, than capable of being thoroughly conceived by description. The *coup d'œil* of the former at once perceives and distinguishes it; *in the latter it becomes too often doubtful, too often assumes the garb of the malignant offspring of marshes,*" &c. (Letter to Dr Haygarth, p. 134.) I now proceed to the detail of facts.

Finding an epidemic fever, of a new and extraordinary nature, prevailing, with great and unrestrained violence; communicated, in every instance wherein its progress was traced, from the sick to the healthy; resisting all the usual modes of treatment employed in the endemic fevers of the country, and evidently not assignable to the causes of these fevers; it became my duty, as it was my inclination, to inquire into the origin of an evil which had every appearance of being foreign to the place where it prevailed. It was reported that it proceeded from infection, imported by a ship just arrived from the coast of Africa. It was proved, beyond the possibility of doubt, that the circumstances of this ship were distressing and shocking, beyond any thing that had been hitherto observed in the port; that those sailors, who assisted in working this ship into the mouth of the Carenage, for it was with the utmost difficulty the wretched people belonging to herself could bring her to an anchor in the bay, at a considerable distance from shore, sickened, and communicated the disease to the crews of their respective ships; and that the disease spread from ship to ship, and always in a direction, and to be traced from the African ship. These facts were stated to me by the captains of the ships in which this dreadful calamity took place, and by the most respectable merchants of the island; and they were amply confirmed by my own, and my partner, Mr Campbell's observation. A Bermuda mercantile house, Messrs Wood and Company, first received the infection on shore. I attended the family, and could not be deceived, had there been a design to deceive. A negro woman, belonging to the house, took in washing from the shipping; and from the foul and infected linen, thus brought into the family, the disease was communicated to the different members of it. From this the adjoining families received the infection, and it spread gradually to the whole town. No doubt, other instances of direct intercourse with the shipping, and of direct introduction of infection, may have existed afterwards; but this of Mr Wood's house, I have every reason to believe, was the first. Now, where this first introduction of infection happened, was remarkably healthy before, and continually cooled and refreshed by a strong breeze of the regular trade-wind. The manner in which the disease spread in town, clearly evinced its contagious nature; for it was most strictly true, that all who, from friendship, business, or duty, communicated with the diseased, became themselves infected; and no instance occurred, wherein the contagion could not be traced to its particular source. The garrison received the infection in a different manner. Several officers of the 45th regiment, whose spacious and well-aired barrack stood on an elevated rock, in the immediate vicinity, and, indeed, forming one side of the entrance into the Carenage, and directly to leeward of the ship Hankey, daily amused themselves in a sailing-boat, which they kept for that purpose. Some of these officers, among whom was Captain, afterwards Lieutenant-Colonel Drew, visited the Hankey, and, with the soldiers who navigated the boat, remained on board some time. The consequence of this imprudence was fatal to one of the officers, Lieutenant N——, and soon after became so to many of the men. All these circumstances being indisputably ascertained, I was convinced that the accusation of the Hankey was justly founded. But something more was required to establish the fact, and this I endeavoured to obtain. At a friend's, (Mr Palmer's) house, lived a person who came passenger in this ship from the coast of Africa. From him I hoped to obtain such information as might throw sufficient light on the seemingly mysterious state of the ship, and enable me to ascertain how far the origin of the disease was to be attributed to that state. I got myself introduced, and learned from him a number of interesting particulars, which I believed to be true, viz. that great privations and distresses had been sustained, by a body of men embarked in an ill-concerted scheme of colonization; that disease had swept away the greatest part of them; and that a fever, of a kind which my informant could not distinctly characterize, had been the chief agent of mortality. This account was amply confirmed by the state of the ship. But the report of the infectious state of the Hankey became so general, and representations to the lieutenant-governor, Mr Home, of the fatal consequences of her being permitted to remain in the harbour, were so urgent, that measures were adopted by that gentleman, with the advice of the council, to examine the circumstances. The first step taken for this purpose, was to send some intelligent men, among whom was Captain William Liddle, of the ship General Matthew, on board the Hankey. The report of these gentlemen induced Mr Home to order Captain Cox to be brought before him in council. The result of this

I have stated in my essay; and the subjoined letters, from K. F. Mackenzie, Esq. at that time attorney-general, and, after the death of Mr Home, by virtue of his situation as president of council, commander-in-chief of the island of Grenada;—and from James Baillie, Esq. now of Bedford Square, London, then of the house of Baillie, Thornton, and Campbell, the first mercantile house in the island, will, I trust, fully confirm the truth of that statement.

Now, having all this before me; a state of things obvious to the most common observer, and observed by every one present, what conclusion was I to draw?—Could I say this was a fever proceeding from local causes, when, immediately before the arrival of the distressed ship, no such causes existed in those places where the fever first appeared and principally prevailed?—Could I say, or could I believe it was not a fever of infection, when it was universally observed in the town, that the healthy sickened, and became afflicted with the peculiar symptoms of it, after communicating with those labouring under the fever; and whilst it was equally notorious, that the healthy, who did not communicate with the sick, remained healthy!—What would even a Dr Bancroft conclude under such circumstances?—He might endeavour to explain away the circumstances in his own peculiar manner; or say, the belief of contagion, notwithstanding the demonstration of one's senses, was "a vulgar apprehension." But, if I may be permitted to use the words of the Bishop of Cloyne, in a discussion such as that now before us, I would say to Dr Bancroft, "I am of a vulgar cast, simple enough to believe my senses, and leave things as I find them. It is my opinion, that the real things are those very things I see, and feel, and perceive by my senses. That a thing should really be perceived by my senses, and at the same time not really exist, is to me a plain contradiction." The man of common sense, will not, therefore, hesitate to declare this fever was a fever of infection, derived from the ship Hankey. But Dr Bancroft, and his predecessors, all cry out, it is a fabricated story; and the fabricators of, and believers in it, are malignant, mischievous enemies of mankind, and ridiculous, absurd, and fatuitous men. Let, however, the question be asked, what purpose was the fabrication of a story of this kind to subserve?—What object could be rationally looked for?—I declare, upon my honour, I cannot, for my own part, conceive one; nor has any gentleman, then residing at Grenada, with whom I have conversed on the subject, been able to form an idea of any end whatever to be obtained by it. At the time the Hankey arrived at Grenada, the existence of Bulama was unknown to me, and, of course, the scheme of colonizing it; and I am persuaded not one person in the island knew more of it than myself. To say, therefore, we were jealous of such a settlement, is really one of the most absurd notions that ever a Dr E. H. Smith, or a Dr Edward Nathaniel Bancroft, could conceive, strange, unnatural, incredible, and fantastic, as their notions on this important subject have generally been.

Now as to the vacillancy of my opinions. One truth was obvious, that the fever was contagious;—another was equally so, that it was derived from the Hankey. In these my opinion could not be otherwise than fixed. Whatever vacillancy may appear, relates entirely to the manner in which this contagion was originally generated; and, in fact, is more attributable to the interested, incorrect, and varying testimony of Mr Paiba, than to any misconception on my part. From this testimony there was room given to believe, that it might have originated, "perhaps, from the inclemency of the season, and the circumstances of the situation of the adventurers, and had become, by confinement, filth, consequent impurity of air, and depression of spirits, a true jail-fever, or a fever of infection, heightened to an almost pestilential violence." (Letter to Dr Haygarth, p. 93.)—Unsatisfactory as this view of the origin of the contagious fever certainly was, I could obtain no information sufficient to clear up the obscurity, until the publication of Captain Beaver's Memoranda. The more correct view I was now enabled to take, Dr Bancroft presumes to say I have formed, from availing myself of Captain Beaver's error. But let us inquire whether Captain Beaver has fallen into an error.

Captain Beaver frequently seems desirous of impressing the belief of the healthy state of the Hankey, previous to the rejunction of the Calypso. He closes his second chapter, by declaring, that, "at this time, (5th June 1792,) there were not any sick on board the Hankey." This, Dr Bancroft, (p. 690,) explains in a way most suitable to his own way of thinking; for, in quoting from Captain Beaver's account of this unfortunate transaction, he attributes the healthy and orderly state of the Hankey, to her people having fared better, by procuring supplies of fresh provisions at Teneriffe and St Jago, a cause adverted to, indeed, by Captain Beaver, but a means not considered by him as adequate to the prevention of the fever. In the same page, and in many other parts of his seventh appendix, Dr Bancroft wishes his reader to believe, that the fever on board the Hankey did not appear, until after that ship had been at Bissao—and this, for an obvious reason—for if the ship had been at that place, her people would have been, perhaps, exposed to marsh miasmata, and then the occurrence of fever would have a ready explanation. But Captain Beaver positively states, that when he quitted the

Hankey, on the morning of the 5th, he left a quiet, clean, *healthy*, and orderly ship, &c. On the morning of the 6th, the Calypso joined the Hankey, in the Bijuga channel, before any of the people of the latter, except Captain Beaver and his captain, and the crew of the long-boat, could have been within the influence of marsh miasmata, for she lay at anchor only within sight of the island of Bissao. (Afr. Mem. p. 39.) On the 7th, Captain Beaver returned to the Hankey, when he found her a noisy, dirty, disorderly ship, &c.; and he proceeds to inform us, that "the fever, from which the Hankey was still free, had already made its appearance in the former ship; and, instead of separating the infected from the well, and taking any steps to prevent the spreading of that dangerous disease, by prohibiting any unnecessary intercourse between the two ships, the whole time, since the arrival of the Calypso, had been taken up in the constant interchange of visits; nay, the affected themselves, the very persons who had the fever on them at the time, had been actually on board the Hankey; and the consequence was, that many days did not elapse before the fever made its appearance in that ship also." P. 52. Captain Beaver, taking a retrospect of the situation of the Calypso, at the time she joined the Hankey, adverts very pointedly to the infection on board, in these words, "their ship infected with the fever:" and, at p. 313, he says of the Calypso, "to that ship only must be attributed most of our misfortunes." But that the infection existed on board this ship, previous to her arrival at Bulama, and the unfortunate landing of her people, appears evident, from the following remarkable expression of Captain Beaver's: "The fatal measures which led to this event, (the slaughter of some of the colonists of the Calypso,) have already been related; its immediate operation towards the failure of the enterprize, was by the delay which it created before we could commence our labours, *ere which, the fever had made some havock.*" (Ibid.) It seems, also, a satisfying evidence of the existence, or of well-grounded suspicions of the existence of infection on board the Hankey, that Captain Beaver deemed it necessary to give instructions, the operation or tendency of which was to destroy infection. (p. 92.) The above passage is contained in a recapitulation of the principal causes of the failure of the attempt, "none of which can be attributed," says he, "either to the difficulty, or the impracticability of the enterprize itself," written ten or twelve years after his return to England from Bulama. It appears, then, that the Hankey, and Beggar's Bennison, had not been at Bulama, and, of course, the colonists on board these vessels had not commenced their labours,

bours, had not been at all exposed to marsh maiasmata, when the Calypso joined them in the Bijuga channel, and when the people on board the Hankey had visited those of the Calypso. Whence, then, did the fever the former received from the latter proceed? Not from marsh miasmata, for they had not as yet been exposed to any:—not from any irregularities of their own, or any thing capable of producing disease in the Hankey; for the people were orderly and satisfied, and the ship was clean and healthy. Now, if we admit, to its fullest extent, the notion of the long latent state of the virus of marsh miasmata in the human system, and of its being brought into activity by irritants; yet I believe Dr Bancroft has not supposed, far less contended, that the fever produced by the action of marsh miasmata, is communicable to an healthy person, who has not been exposed to marsh miasmata; and yet to prove the absence of contagion in the present instance, this is a proposition that must be admitted. When I weigh this evidence against the violence and unreasonable assertions of Dr Bancroft, and the interested representations of those associated in the colonization of Bulama; and compare the result with the obviously distressed state of the Hankey, on her arrival at Grenada, and with the destructive consequences of communicating with her to the sailors and inhabitants of that island, it would be "fatuity," indeed, to harbour a doubt of infection having been received by the people on board that ship, on her rejoining the Calypso, and afterwards communicated to the unfortunate people who had intercourse with her at Grenada, through the medium of clothes and bedding. The reasoning of Dr Bancroft is mere sophistry, when thus tried by the touchstone of plain unsophisticated observation, and common sense. The reader of Dr Bancroft's book will here readily recal his very unwarrantable, and very unhandsome treatment of two very distinguished physicians, Dr Haygarth, and Sir James Fellowes, on an occasion precisely similar. (p.489) Dr Bancroft ought to recollect the reproof of rash judges, to which I have already called his attention, when he classes the former among "the most violent zealots," and the latter with those whose opinions waver with every succeeding representation of facts, just or unjust; and doubts, "whether Sir James Fellowes would ever have entertained such an opinion of these epidemics, had he been left by Dr Haygarth, and others, to the unbiassed conclusions of his own reason." Captain Beaver, it is evident, however, has adhered to the unbiassed conclusions of his own reason, notwithstanding there appears sufficient proof, in the passages from the African Memoranda, quoted by Dr Bancroft, that attempts were made to bias his mind to the adoption of different conclusions.

As to the fever which so fatally prevailed in the Hankey after the departure of the Calypso, assigned with unlimited confidence to the action of marsh miasmata by Dr Bancroft, it seems reasonable to attribute it chiefly to the same infection. By one of the laws of marsh miasmata, as stated by Dr Bancroft, the radius of their action is very limited, even to a quarter of a mile (p. 219.)—it is probable, therefore, as the Hankey lay moored in the Biafara Channel, that she was beyond their influence, and that those who remained constantly on board could not suffer by them. By another law of these miasmata, it is probable, that as none slept on shore, so none could be affected by them; for it is, we are told, during the night only that the baneful influence of marsh miasmata betrays itself—during the day, it exhibits none. Now this is on the supposition that marsh miasmata actually existed at Bulama. But when we consult Captain Beaver, he honestly tells us there is nothing of the kind—that Bulama is a paradise, and seems to have been produced in one of natures happiest moods. (p. 342.). If we consult other voyagers who have visited the island, we have still more direct assurances of its great salubrity: M. Dumanet (Wadstrom's Essay, P. 2. p. 131.) tells us, "the air here is much more salubrious than on any other part of the coast;"—Mr Wadstrom declares, (P. 2. p. 141.) "not one death can be attributed to the climate of Bulama;" and in the note (G. G.) gives a variety of authorities on which this declaration is founded. Mr Paiba's testimony goes to the establishment of the same fact; "On the whole, says he, the situation is one of the most pleasant and healthy on the coast of Africa,"—"being totally, as far as yet investigated, exempt from marshes and stagnant waters." (Med. Rep. Vol. I. p. 473.) Mr Young, a member of the council of Bulama, thus states a remarkable fact respecting the qualities of the soil and air of that island: "The atmosphere of this island is remarkably salubrious, as we can all testify, particularly a large party who, having lost themselves in the woods, by indiscreetly venturing too far without a compass, passed five days, *and as many nights*, in the open air, without any sickness having resulted from it: the utmost heat, whilst we were there, by Fahrenheit's thermometer, being 84, tempered by a pleasant sea-breeze, which enabled our people to work during the whole day without inconvenience." (Wadstrom's Essay, P. 2. p. 309.) It will readily occur to those who have taken the trouble to peruse Dr Bancroft's book attentively, particularly the 7th Appendix, that Mr Young's fact sets aside the conclusion the doctor draws from the colonists of the Calypso, "sometimes sleeping on shore, and otherwise exposing themselves most incautiously to the action of marsh miasmata (nowhere indeed existing on the island);

island); viz. those who have lived between the tropics, or who have read of the numerous instances of mortal fevers which have been produced by sleeping *a single night* on shore, will not be surprised that, after such conduct, it should have been found, as is mentioned by Captain Beaver, that on the 8th of June the Calypso had many persons ill of fever." The instances of mortal fever thus called up in terrific array, occurred in situations decidedly and avowedly marshy; but at Bulama there are no marshes, and therefore, in direct contradiction to the assertion of Dr Bancroft, we are told by a respectable eye-witness, and one of the party, that " a large party passed not only five days, but five nights in the open air, and in the woods, without any sickness having resulted from it. If indeed we are to believe that every pool of water, every field of fresh verdant grass, every accidental accumulation of decaying vegetables or cabbage leaves, abound with the virulent poison of marsh miasmata, then indeed we shall nowhere breath a pure uncontaminated air; then, indeed, the seeds of marsh fever must be continually entering into our systems, and a sandy desert alone (for rocks, it seems, harbour disease, see Dr Bancroft, p. 473, et seq.) secures us against these, thus universally existing enemies of human life. But if the testimonies I have adduced be faithful ones, and certainly we have no reason to think otherwise, how has it happened that, by Mr Young's return of the deaths, fifty-four should have died on board the Calypso, during her voyage out and home; and that, of this number, twenty-one should have died at Sierra Leona, thirteen between Sierra Leona and London, and five after the ship arrived at her moorings in the Thames. (Wadstrom, P. 2. p. 313.) Again, if Bulama be thus healthy in its nature, how did it happen that forty, Dr Bancroft says forty-eight, died there, after the departure of the Calypso? But our surprise must vanish, and the cause will appear obvious, when we attend to the character of these people, as stated in various parts of the African Memoranda, and also in a letter of Captain Beaver's, published in the 2d. P. of Wadstrom's Essay, p. 300, adverted to by Dr Bancroft, but not fairly quoted by him, p. 691. The letter is addressed to the trustees of the Bulama association, and dated 22d November 1792. " With respect to our prospects, I am more and more convinced that the colony, if at all supported, will succeed. We want a reinforcement of men, but not such as the last. They should be carpenters, blacksmiths and bricklayers, men accustomed to labour, not such as we brought out, *habituated to drunkenness, idleness, and all the vices of the capital; most of whom came here in dread of punishment for crimes committed against their country's laws.*"

In justification of his violent, unjust, and unreasonable accusations, Dr Bancroft refers to the authority of Dr Winterbottom; but, in doing so, he quotes only that part of what that respectable physician says on the subject, which more immediately relates to his peculiar way of thinking, and wholly overlooks what precedes. Dr Winterbottom says, "Notwithstanding the instances adduced by Dr Chisholm of several persons who were seized with a dangerous fever soon after they had visited a vessel called the Hankey, which arrived at Grenada from the island of Bulama or Boullam, and notwithstanding the sickly state in which this vessel is said to have been on leaving Bulama, and during the passage to the West Indies, yet there is reason to suspect that the disease in question, if really imported into those islands, did not originate from the island of Bulam. In other instances we find every specific contagion produces a disease *sui generis*, differing only in greater or less degree of violence, or at most possessing such slight deviations as are occasioned by particular states of the atmosphere, or peculiar modes of living. But in the instance of the pestilential fever described by Dr Chisholm, we should be induced to suppose, that the contagion had not merely acquired a greater degree of virulence, but had been converted into a different species." (Account of the Native Africans, Vol: II. p. 15.) This is precisely the point at issue. This is the true nature of the malignant pestilential fever of 1793, 1794, 1795, and 1796, deduced from a faithful view and consideration of its history and peculiar features, and a comparison of these with the facts detailed by Captain Beaver; facts which have withdrawn the veil concealing the singular marks and characteristics of this fever until the publication of the African Memoranda; and this is precisely the opinion I have stated in my letter to Dr Haygarth, quoted in the preceding part of this paper. There is, however, much reason to believe, that Dr Winterbottom permitted himself to view the fever, so fatal to the Calypso's people at Sierra Leona, with an unwary eye; and that with him, as unhappily with many others, its nature was misapprehended; for as it is a disease more obvious to the senses, than capable of being thoroughly conceived by description, so does it so often happen that we meet with counterfeits, and with many respectable physicians on whom the imposture has been too successfully practised:—and as it is the experienced and unprejudiced eye that can best perceive and distinguish its peculiar features, so to others do these become too often doubtful, and too often assume the garb of the malignant offspring of marshes, in situations where marshes do not exist. Dr Winterbottom has said, "that the Calypso, after leaving Bulam, called for refreshment at Sierra Leona, where she remained about six weeks, during which time *upwards of forty of the crew and passengers died of the*

the remittent fever, though unattended with any appearance of peculiar malignity." (Account of the Native Africans, Vol. II. p. 16. note.) In a mortality of about one in four of the whole of the people on board the Calypso, (there being one hundred and forty-seven colonists of all descriptions, and perhaps twenty sailors; see African Memorand. p. 84.) occasioned by this fever, the absence of "any appearance of peculiar malignity," is astonishing indeed, and is, I apprehend, totally irreconcilable with the local circumstances of Sierra Leona, as described by Dr Winterbottom himself, and with those of Bulama, as we see by the descriptions already referred to; or must be considered as furnishing a dicided proof of the deceitful nature of the disease itself. Dr Winterbottom thus describes the soil and air of Sierra Leona, Vol. I. p. 279: "The soil in the neighbourhood of Free-Town is of an argillaceous nature, mixed with sand; in some parts it is of a very deep red colour, and here and there interspersed with rocks. The situation of the town upon a gentle slope renders it dry, and its elevation exposes it to the regular sea and land breezes. *It is not incommoded by swamps in its vicinity, consequently the breeze is inhaled with pleasure, and leaves no noxious effects behind.*" It is with infinite reluctance I thus seem to hold a different opinion from Dr Winterbottom, for whose talents, learning, and judgment I cherish a very high respect; but the circumstances I have stated from his own writings, seem to have so obvious a tendency to conclusions essentially different from those the doctor has drawn, and more especially from those Dr Bancroft so sedulously wishes to impress as resulting from them, that to act otherwise than I have done, would be to relinquish the opinion the best exercise of my reason, my observation and experience, and the very nature of these circumstances themselves, conspire to establish firmly in my mind.

What remains of Dr Bancroft's 7th Appendix I pass over in silence; all that can be said on the subject, has been already submitted to the public in my Essay, Vol. I. Preface, and Part I. ch. 1. sect. 1. and 2. and in my letter to Dr Haygarth, Prop. 3. and to these I beg leave to refer,—personal abuse and recrimination not being my *forte*. I shall, however, embrace an early opportunity to offer some strictures which have occurred to my mind on the perusal of the body of Dr Bancroft's book; in the mean time, I shall close my present address with extracts from the letters I have alluded to. I had the hope of being able to add to these, others from medical gentlemen who were at Grenada during the prevalence of the malignant pestilential fever. Of these I have hitherto been disappointed.—I remain, &c.

Bristol, *22d July* 1813.

Letter from K. F. Mackenzie, Esq. Attorney-General, and President of the Council of Grenada, during the years 1793, 1794, and 1795.

My Dear Sir,

I received last night your favour of the 6th instant, and lose no time to answer, as fully as I can, the several queries which it contains; though, as twenty years have now nearly elapsed since the events to which they relate took place, many circumstances must have escaped my memory.

1. The infectious and distressed state of the ship Hankey, at the time of her arrival at Grenada, in February 1793, I can speak to only from report then generally prevalent there, and, as far as I know, never disputed. It was to this effect: That having carried a number of passengers to the island of Bulam, on the coast of Africa, they were, from want of accommodation ashore, obliged to remain on board during the rainy season, when the fever in question made its appearance, and proved fatal to a great many of the passengers and seamen. That, on her passage to Grenada, she was met by Commodore Dod, and her crew being reduced and weakly, the commodore sent three of his own men to assist in navigating her, who all died. That, on her arrival at Grenada, she was placed by the harbour-master in the mouth of the Carenage, at the leeward extreme end of the shipping; and that the disease first appeared in a vessel, (the Defiance) with which the people of the Hankey had had communication, at the innermost and windward end of the shipping in the Carenage. That, previous to the arrival of the Hankey, Grenada was healthy; but soon afterwards this fever, known generally there by the name of the Bulam fever, began its ravages in the town of St George; and also attacked the seamen in the harbour of Labay, shortly after the Hankey went round there to take in a cargo for London. The first part of this statement was, to the best of my knowledge, obtained from Captain Cox, and a passenger, whose name I do not recollect.

2. Captain Cox was, I believe, examined, and the state of the ship and crew investigated, by order of Lieutenant Governor Home; but the particulars I cannot charge my memory with.

3. I do not think I was present at the examination of Captain Cox; but I heard afterwards in council, that he had acknowledged the effects of those who died were on board the Hankey, but that he said he would not destroy them, unless indemnified against the claims of the representatives of the deceased.

4. The disease attacked the inhabitants of the town, and the soldiers nearly about the same time, to the best of my recollection; and not a doubt was then entertained, as far as I know,

of its contagious nature, and that it originated from the Hankey. The first person that I heard express an opinion of its not being contagious, was one of the army physicians, who, in 1795, came from Martinique to Grenada, to attend the garrison; but when he introduced himself to me, which was immediately after he landed, and before he could have seen any of the medical gentlemen of the island, he expressed himself on the subject with such silly flippancy, and displayed so much contempt for the opinions of the Grenada practitioners, and such an uncommon portion of self-conceit and confidence in the wonders which he was to perform, that I held but in little estimation either the man or his opinions.

5. Mr Sharpe, the solicitor-general, was attacked by this fever, which in a few days proved fatal to him; [this gentleman was a native of the West Indies, and the greatest part of his life a resident in them] and thinking himself dying, requested the attendance of Mr Beete and me in his bed-room, to settle for him some business of importance to his family. Next day we felt symptoms of the disorder, and the day following, I think it was, were confined to bed, reduced to a state of infantine weakness. I have not a doubt that Mr Beete, who lived at that time in my house, and I, both received the infection from Mr Sharpe. When I was beginning to recover, the present Sir William Bruce, now at Bath, came to see me, and had an attack of the disease, which, to this hour, he attributes to that visit. Two people in my family, a man and a woman, both negroes, were attacked by it: the woman died, the man recovered.

6. I firmly believe, (though my opinion, not being a medical man, can be of no importance) that the great mortality which took place in the town of St George and the garrison in 1795, when the inhabitants of the country were obliged to reside in the town, was the result of contagion and not of marsh miasmata. To the first there was much exposure; to the last none.

7. At the first appearance of the disease, it seemed to baffle medicine. Dr Stewart, who was then in extensive practice in the quarter of Labay, told me, that with those to whom local vicinity permitted him to pay most attention, he seemed to have lost success. What medicines were principally employed by the medical gentlemen, I cannot tell; but I know mercury was used, and in many instances, as I have understood, effected a cure, particularly when it affected the mouth.

8. From frequent conversations which I had with you on the subject, I know that you thought favourably of mercury as a remedy, especially when salivation, or an approach to it, was produced; and the results of four cases on my estate of Lusignan in

Demerary, after the disorder made its way there, are a corroboration of the correctness of your opinion, for all the four patients took large quantities of mercury, by the mouth and by friction, but three, who had not their mouths affected, died, while the fourth, in whom ptyalism was produced, recovered. [See Letter to Dr Haygarth, p. 139, 145.] In your own case, I am perfectly satisfied, from the recollection I have of circumstances, and conversations with Dr Monro and Mr Campbell, that you took mercury largely; but that matter may be reduced to a certainty, by applying to Dr Monro. [I request the reader's attention to a note of Dr Bancroft's, p. 83 of his essay, where he accuses me of falsely stating the result of my own case. Mr Mackenzie's obliging statement must be considered as an ample refutation of this absurd calumny. I expect, however, a letter from Dr Monro, which I trust will exhibit the malevolence of this writer in its true light.]

9. I have this morning looked into my letter-book for 1793, and, in a letter from me of the 29th June of that year, to the late Mr James Baillie, who I believe was then colonial agent for Grenada, I find the subject mentioned. I shall now transcribe what I wrote, as it will show my sentiments at the time, which still remain unaltered.

" You have undoubtedly heard of the contagious fever that has raged here for some time, and already proved fatal to upwards of three hundred individuals in the island, principally sailors and soldiers. It was certainly brought to Grenada from the coast of Africa, in the ship Hankey, Captain Cox, now lading in Labay, on board of which the captain acknowledges to have the chests and other effects of upwards of an hundred people who died of the disease on the coast, and on their passage here. The mischief was done in Grenada before the cause was suspected, or at least ascertained. I am very apprehensive that this vessel will carry the infection to the port of London, where she is bound, and where it may prove most dangerous, unless proper precautions are taken. I therefore think it highly proper to mention it to you, that you may communicate it to the secretary of state, or take such other steps respecting it as you judge best."

10. What was done in consequence of this letter, I know not. In Grenada, the bedding of all houses where sailors with that disease had been received, was burnt by order of the governor and council, and new mattresses, &c. given to the owners at the public expence.

I have now said all that occurs to me on the subject, and I heartily wish it may be of service in enabling you to repel the attack made on your veracity. In a matter of opinion, any man may err; but in every thing connected with truth and honour, I know no man in whom I have more confidence than yourself.—Believe me, with real regard, &c.

Clayton, near Cupar, Fifeshire, 12th Feb. 1813.

LETTER from JAMES BAILLIE, Esq. of Bedford Square, London.

MY DEAR SIR,

After an absence of six months, I returned to town the beginning of this week, when I found your letter to me of the 31st ult.

At this distance of time, I can only speak generally to the calamitous disease, with which the shipping and town of St George, in the island of Grenada, was visited, immediately after the arrival of the ship Hankey, Captain Cox, from the coast of Africa, and which spread, in the first instance, to (I believe) every ship in the port, and afterwards to the shore. The havock it made was most grievous. Every evening the boats from the shipping, carrying the dead, past my windows for interment. You may recollect, that I kept as clear of the contagion as I could, personally, although I was under the necessity of remaining in town, my partners being absent; and that I used to stop yourself, and some of the other medical gentlemen, at the door, to inquire after the sick, and to say, that I should be glad to see you at dinner, after changing all your clothes, &c.

I do not recollect, that any one of the family had ever before then died in our house; and God knows we lost enough of fine young men that year, although every possible care was taken of them. I understood that mercury was the medicine which was immediately given the patient, and that where a salivation was produced they always recovered; but the disease was so rapid, that time was not given for it to have that effect.

The ship was ordered out of the Carenage to the bay, but too late. The captain had most unwisely kept the clothes on board that had belonged to those who had died, and of whom there had been a great number. In short, the danger of contagion from that ship, was so great, that I either recommended it to Governor Home, (or did it myself) to write Mr Dundas, then secretary of state, (when I heard she was loading for London) to prevent her coming up the river Thames, pointing out the calamity to this great city, if such a contagious fever should spread in it, and, if I recollect right, it was actually done. Since that period, we have all heard how it spread in the different islands, and on the coast of America, from the communication with Grenada.—I am sincerely, my dear Sir, &c.

Bedford Square, 20th February 1813.

To Dr Chisholm.

The following letter I am obligingly favoured with by Lieutenant-General Oliver Nicolls, whose consummate conduct on a former occasion, as lieutenant-colonel of the 45th regiment at Grenada, saved that regiment from the ruin impending over them, through the negligence of an immediately preceding commanding-officer. (See Edin. Med. and Surg. Jour. Vol. VI.)

My Dear Sir,

Your letter of the 3d instant, which went to Canterbury where I had commanded, came here while I was absent for a few days in London, which accounts for my not sending you an earlier reply. I think it may be both the clearest and shortest way to set down your questions, and opposite to them my answers.

1st, What were the circumstances of the ship Hankey, when she arrived at the port of St George's, Grenada, 19th February 1793, as far as you know, or have heard?

Ans.—I was not in the West Indies in the year 1793, but I have heard, from gentlemen of veracity and consequence, that the Hankey arrived in a dreadful sickly state.

2d, What was the progress of the fever, from that ship to the other shipping in the Carenage, and to the inhabitants of the town and garrison?

Ans.—I was not there, as I have stated above, but I understood, from the time the fever began among the other shipping, its progress was alarmingly rapid and destructive.

3d, In what manner did the 45th regiment receive the infection of this fever, and to what extent did it proceed in that regiment? Could they, in the barracks they occupied, be afflicted with an epidemic, the cause of which might be marsh miasmata? or could filth, imperfect ventilation, or any local cause of disease, affect them at that time, epidemically?

Ans.—How the 45th regiment received the infection, I cannot speak, of my own knowledge; but its effects were very fatal. The regiment was quartered in good barracks, not crowded, and well ventilated, with no swamp or marsh near them. I can answer for the 45th regiment having been uncommonly healthy in those barracks, when I commanded them, from 1789 to 1791, when their messing, the cleanliness of the men in their persons and in their barracks, even to a degree of neatness, was strictly attended to; which system, I have every reason to believe, was rigidly carried on; so that I neither think their situation, want of cleanliness, or imperfect ventilation of the barracks, could have been, or were the causes of the disease.

4th, What is your belief of the causes of the great mortality which took place in the town of St George's and the garrison, during the year 1795? Was it the result of marsh miasmata or contagion?

Ans.—I believe contagion, for I think I took the fever myself in that way. I was in good health when I went to sit at the bed-side of the late Captain Rogers, (Royal Navy) when in that fever; also to visit, the same day, at the request of his friends, Major Mallory of the 29th regiment, then under a fatal attack of the fever, and who refused taking medicines. The same night I was myself attacked. From this I conclude the fever was contagious.

5th, Do you recollect, in the course of your experience of the East and West India climates, any fever whose features were similar to those of the fever of 1793, 1794, and 1795, of Grenada, arising from local causes?

Ans.—I am no judge of what you professionally call the features of a fever, but I can say, that I never knew, anywhere that I have been, so fatal a disease, as that which went generally at Grenada by the appellation of the Bulam fever.

There was no occasion, my dear Doctor, for the least apology about trouble. I should feel it rather a pleasure to have been able to have given more direct and distinct answers than I have done, which are only from my memory, without reference to notes, which might have enabled me to speak with certainty to the numbers that were cut off by that fatal disease in the 45th, from reports that had been made to me. But having been able to speak strongly in the answer to the third question, I think what I have stated will show, that, as the regiment continued in the same quarters that they were very healthy in, under my command, the point is established, that neither from position, from want of cleanliness, nor from a want of good ventilation, the disease could have originated.—I am, my dear Sir, &c.

Lymington, 15*th March* 1813.

To Dr Chisholm, &c. &c. &c.

VIII.

Some Observations on the Nature of Febrile Diseases, and their Nosological Arrangement, in a letter to Dr Duncan, jun. By A. P. Wilson Philip, M. D.

As I know that nosology has demanded much of your attention, and that you can justly estimate its influence on the practice of medicine, I need make no apology for addressing the following observations to you. Some pertinent remarks on my arrangement of febrile diseases appeared in the last number of the Edinburgh Medical and Surgical Journal. It will appear from the introduction to the second part of my treatise, that I so far meet the ideas there thrown out, as to regard hæmorrhagy and profluvium as only modifications of inflammation; and consequently febrile hæmorrhagies and profluvia, as only modifications of phlegmasiæ; but the circumstances on which this opinion is founded, appear to me sufficiently to reply to what is said in the above journal against regarding the fever as equally symptomatic in all these diseases *. I did not, however, regard it in the two former as symptomatic of the discharge, I only considered the discharge as their proper nosological distinction, and there appears, indeed, to be no other means of characterizing them.

My object in the introduction just alluded to, is to prove the identity of the nature of all febrile diseases, to shew that they all arise from the same kind of derangement taking place in the capillary vessels. I shall lay before you a concise account of the experiments and observations which appear to me to render this conclusion unavoidable.

It would be difficult to conceive any experiment by which we could directly ascertain the cause of fever, but there are local affections which, when existing to a certain extent, uniformly produce this disease; and it does not appear difficult to ascertain, by direct experiment, to what change in the part we are to ascribe the power of these local affections to produce fever. We shall thus acquire a knowledge of the immediate cause of fever in a large proportion of cases, and shall be enabled to judge, from the symptoms which indicate the presence of this cause, how far it operates in idiopathic fever.

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* I admit the force of the observations made in this journal on the cynanche maligna, but in a nosological system it can hardly be separated from other species of cynanche. This is one of those instances in which perfect nosological accuracy appears to be unattainable.

It was necessary to begin such an inquiry with a disease which could readily be made the subject of experiment. Inflammation is easily excited, and it is not difficult, with the aid of the microscope, to see the changes which take place both in its commencement and progress. In endeavouring to ascertain the nature of this disease, the first thing to be determined, is, whether any of the received opinions respecting it is correct?

The following are the principal opinions which have prevailed on this subject. Inflammation has been supposed to arise from a morbid lentor of the blood clogging the minute vessels; or from the grosser parts of the blood getting into vessels too small to transmit them. It has by some been ascribed to a spasm of the extreme vessels of the inflamed part; by others to an increased action of all the vessels of the part; and this is the favourite hypothesis of the present day, at least with the medical men of this country.

The reader will readily perceive that the principle of the three first doctrines is the same. In all, obstruction is regarded as the cause of inflammation. It is surprising, therefore, that none of the supporters of these opinions tried whether or not obstruction is capable of producing inflammation. Admitting that the vessels of a part are obstructed, it does not follow that an accumulation of blood will take place in it; the blood may pass off by anastomosing branches, the vessels resisting the distending force. If it be found that obstruction of the vessels may take place without producing any symptom of inflammation, these doctrines must be abandoned.

I passed a hot wire through the web of a frog's foot, by which the skin about the hole was shrivelled, and the vessels obstructed, no fluid of any kind being discharged. Here an obstruction was produced, surely more than equal to what takes place in many inflammations of small extent, and yet no symptom of inflammation followed, every part of the web appearing as pale as before the experiment.

The opinion which ascribes inflammation to a morbidly increased action of the vessels of the part, it is equally easy to subject to the test of experiment. It is only necessary to produce such an action, and see if inflammation is the consequence. Having adapted the web of a frog's foot to the microscope, I now and then, during some minutes, observed the velocity of the circulation, which continued, as far as I could judge, the same. I then wetted the foot with distilled spirits, and in a few minutes observed the blood in all the vessels moved with a greatly increased velocity, which, as I constantly kept the web moist with spirits, continued as long as I observed it, ten minutes or a quarter of an hour. But during no part of this time could I perceive the slightest symptom of inflammation, either with or without the microscope. The vessels, instead of appearing redder and more turgid, were evidently paler and smaller than before the application of the spirits. I farther increased the velocity of the circulation by throwing on the web the concentrated rays of the sun from the speculum of the microscope, and still with the same effect.

About the year 1792, Dr Lubbock and Mr Allen advanced an opinion, which stood in direct opposition to the last of the foregoing hypotheses,—that inflammation arises from debility of the vessels of the inflamed part.

On viewing an inflamed part of the web of a frog's foot through the microscope, I found its vessels greatly dilated, and the motion of the blood extremely languid. It was at once evident, on viewing the part through the microscope, that where the inflammation was greatest, the vessels were most distended, and the motion of the blood was slowest. In the most inflamed part it had ceased altogether. I excited the inflamed vessels to stronger action by wetting the web with distilled spirits, and throwing on it the concentrated rays of the sun from the speculum of the microscope, and in proportion as the motion of the blood was accelerated, the diameters of the vessels were diminished, and the inflammation was lessened.

In various succeeding experiments, both in the cold and warm blooded animal, I observed the progress of inflammation from its commencement to its height; repeatedly saw it induced by debilitating the capillaries, and relieved by increasing their action; and, in the introduction above referred to, I have given a plate representing its different stages.

It appears, then, that the state of the capillaries in an inflamed part, is that of preternatural distention and debility; but the larger vessels of the part do not seem to partake of this debility. Unassisted by glasses, we readily perceive that they do not suffer a similar distention; and in the larger arteries there is evidently an increased action, not obscure, but such as may be ascertained without difficulty. I have often, in inflammatory affections of the jaw, applied the finger to the external maxillary artery, both where it passes over the bone and after it assumes the name of labialis, and in rheumatic affections of the head to the temporal arteries, and found them beating with unusual force. Authors have observed, that an unusually strong beating of any of the arteries indicates that inflammation, if not actually present, is about to begin in the parts supplied by it. When the inflammation is of small extent, the increased action of the larger arteries only takes place in its immediate neighbourhood. In proportion as the extent of the inflammation increases, the increased action of the larger arteries extends farther from the inflamed part; and when the inflammation is of a certain extent, or seated in an organ of great sensibility, this increased action extends to the heart, producing general fever.

It is to be observed, however, that although the distention of the vessels, as was evident from several of the experiments above alluded to, begins in the capillaries, yet, if the inflammation continues, the circulation in the smallest vessels being obstructed by their debility, those immediately preceding them soon begin to be distended, and consequently debilitated; so that in inflammations which have lasted long, the vessels preceding the capillaries in the course of circulation, as well as the capillaries themselves, are distended. Thus, when the fin of the lampern was first exposed to the air, the inflammation assumed the appearance of a slight blush, in which it was difficult with the naked eye to discover any vessels; but after some time had elapsed, vessels of a considerable size were seen creeping through the inflamed parts. It is evident that this cannot go very far, because, when the vessels preceding the capillaries have lost their power, the circulation is no longer in any degree supported in the latter, and gangrene must soon ensue.

When the larger arteries are debilitated, and consequently distended in the first instance, the disease, which may be termed turgescence, or partial plethora, is of a nature very different from inflammation. In this case, there is little or no accumulation of blood in the capillaries, as appears from their being pale or only slightly turgid, the *vis a tergo*, from the debilitated state of the larger vessels, being too feeble to occasion preternatural distention in them. They, therefore, more or less perfectly retain their power, and as long as the larger vessels can supply them with blood, preserve the circulation, so that the states of turgescence and inflammation are opposite. In the one case, the action of the capillaries is weak, compared with that of the larger vessels; in the other, the action of the larger vessels, compared with that of the capillaries.

Inflammation, then, arises from the power of the capillaries bearing too small a proportion to the *vis a tergo*, in consequence of which they become preternaturally distended, and from the larger arteries being incited to increased action, in order, it would seem, to support the circulation in the debilitated capillaries.

If the increased stimulus thus applied, succeeds in exciting the latter to due action, the inflammation ceases. If not, the debility of the capillaries increases till they wholly lose the vital principle, and are either removed by the process of suppuration, or become subject to the laws of dead matter, gangrene of the part ensuing.

Although the increased action of the larger arteries is evidently the means employed by nature to excite the debilitated capillaries, when the debility of the capillaries is considerable, its effect is often that of still farther distending and debilitating them, by which either suppuration or gangrene is induced. It is, therefore, often necessary, in order to obtain resolution, to lessen the action of the larger arteries by venesection, a moderate and long continued stimulus often effecting what a more powerful and transitory one fails to do.

The experiments above referred to seem also to throw light on the nature of hæmorrhagy and profluvium. The effusion of red blood is generally the consequence of rupture, either from external violence or increased *vis a tergo;* hence the frequency of hæmorrhagy in synocha and in active inflammation. In the latter, the local debility, at the same time rendering the vessels more subject to rupture and increasing the *vis a tergo,* some vessel at length gives way, the distention is relieved, the vessels recover their tone, and the inflammation ceases. Hence inflammation is often cured by a spontaneous hæmorrhagy from the part, and more or less inflammation generally precedes what is called active hæmorrhagy; the increased *vis a tergo,* before it occasions rupture, necessarily occasioning more or less distention. Thus, the only difference between active hæmorrhagy and active inflammation is, that in the former, a vessel gives way, the flow of blood relieving the distended vessels in the same way that artificial blood-letting from the part is found to do.

The *vis a tergo* previous to hæmorrhagy sometimes distends the larger vessels of the part instead of the capillaries, and then the symptoms of congestion, not of inflammation, precede the hæmorrhagy; the patient complaining rather of a sense of fulness and distention, than of heat and pain in the part from which the blood is about to flow.

Active hæmorrhages then are spontaneous evacuations of blood which relieve an inflammation, or what has been termed congestion, and in proportion as the hæmorrhagy is profuse, the inflammation or congestion is more perfectly relieved *.

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* Introduction to the second part of my treatise on Febrile Diseases.

Passive hemorrhagy is only a greater degree of that state which we term passive inflammation. It appears, from what is said in the introduction just referred to, that when the vessels of a part are greatly debilitated at a time when the *vis a tergo*, from general feebleness, is much below the healthy degree, but still sufficient to distend the vessels of the debilitated part, passive inflammation ensues; that is, that kind of inflammation in which the local symptoms, as well as general excitement, are inconsiderable, the *vis a tergo* not being sufficient to distend the vessels to the degree which occasions the temperature, swelling, and other symptoms of active inflammation. But when the relaxation of the vessels is extreme, the blood oozes from their extremities, preventing its accumulation in the part, and consequently the symptoms of inflammation. Thus, in bad forms of typhus, any irritating cause readily excites languid inflammation of the stomach, intestines, &c.; but in extreme cases of typhus, instead of inflammation, dark-coloured blood oozes from the sides of these cavities.

If the relaxation is chiefly in the colourless vessels, and particularly in the exhalents, which frequently happens, because the farther vessels are removed from the heart, (as I have often observed in making experiments on them), they are the more easily debilitated, the discharge is colourless; and this discharge increasing as the *vis a tergo* increases, prevents inflammation, by preventing distention of the capillaries.

But should any cause debilitate the red vessels of the part, the smallest of which supply the *vis a tergo* to the colourless vessels, the colourless discharge must cease from the want of the *vis a tergo* which supports it; and the smaller red vessels being now debilitated, will be distended by the *vis a tergo* which impels the blood into them, and inflammation ensue; as often happens from cold in gonorrhœa, coryza, catarrh, &c.; for it is to be remembered that the heart supplies the whole *vis a tergo* only to the arteries, into which it immediately propels the blood, the *vis a tergo*, in all the other vessels, whether arteries or veins, depending more or less on the action of those which precede them in the course of circulation.

On the other hand, if the colourless discharge by which distention is prevented, be checked by powerful astringents, the distention must soon ensue to the red vessels, and all the symptoms of inflammation in this way also must supervene, as happens in gonorrhœa, dysentery, &c. from astringent applications.

But if, in either of these cases, any of the red vessels gives way, the flow of blood relieves the distention, and the symptoms of inflammation are mitigated or disappear.

If instead of the rupture of a red vessel, the exhalents in the latter case again become debilitated, or the red vessels in the former case are excited to action, the colourless discharge is restored, and the distention, and consequently the inflammation are thus also relieved.

In the phenomena of symptomatic fevers, we find these observations fully illustrated.

It is evident, from what has been said, that the local affections of the different orders of symptomatic fevers are of a similar nature, and we readily perceive why they are so easily convertible into each other.

Thus we find, that all the local affections which excite fever consist in a debility of the capillaries; hence the question naturally occurs, whether fever, when arising not from a local, but a general cause, may not depend on the same state of the extreme vessels? As it appears from the experiments above referred to, that inflammation arises from a debility of the capillary vessels, and their consequent distention by the *vis a tergo*, and that we can at will produce this disease by debilitating the capillaries, and relieve it by increasing their action, it is a necessary inference, that where the symptoms of inflammation, increased temperature, redness, and swelling appear, the capillary vessels are debilitated and preternaturally distended. Now, in the hot stage of fever, the whole surface is affected with increased temperature, redness, and swelling. That the capillary vessels are here in a state of debility, farther appears from the preceding symptoms, those of the cold stage, in which the debilitated vessels, not yet being distended by the *vis a tergo*, the surface is pale and shrunk. We can have no doubt that the same state of the vessels, which we observe in the external surface, obtains in the various internal surfaces, which is indicated by the same diminution or loss of the secreting power in them, and, as far as we can see, the same shrinking in the cold, and fulness and redness in the hot stage; and as the debility of the capillaries of a part, always produces increased action of the larger arteries of the part, this general debility of the capillaries produces increased action of the whole arterial system.

Thus, then, we are assured, that the capillaries in simple fever are debilitated; and, from direct experiment we know, that debility of the capillaries is capable of producing fever. If, then, it is found, that this debility can account for all the phenomena essential to simple fever, any other supposition is evidently unnecessary. That it not only accounts for these phenomena, but that they are unavoidable consequences of it, I have endeavoured to shew, in an Essay on the Nature of Fever, published some years ago.

According to the foregoing view of febrile diseases, they should be divided only into two orders, the Febres and Phlegmasiæ, each of which would comprehend three genera; the former, intermitting, continued, and eruptive fevers; the latter, simple phlegmasia, phlegmasia attended with an increase of some colourless secretion, and phlegmasia attended with hemorrhagy. The second genus of the last order, it is evident, besides the profluvia of Dr Cullen, would include many diseases ranked as simple phlegmasiæ. This genus is placed next to simple phlegmasia, because these genera insensibly run into each other, which, indeed, may also be said of the second and third genera.

Such, as far as I am capable of judging, is the proper nosological arrangement of febrile diseases. I have not, however, in my treatise on these diseases, ventured to deviate so far from that adopted by preceding writers.

The foregoing view of the nature of fever, as I have endeavoured to shew, in my Treatise on Febrile Diseases, enables us greatly to simplify the arrangement of the means of cure.

IX.

Pathological and Practical Observations.

(Continued from p. 315.)

The outline of the animal economy is here completed, as far as my present purposes require. It now becomes necessary to separate these complicated processes, so as to class them according to their several relationships. In this way the series of animal processes may be distinguished under five heads. To the first belong the assumption of food, its digestion, chylification, and conveyance into the circulation. To the second, its transmission through the lungs, which completes the process of sanguification, and prepares blood suited for stimulating the arteries, and affording matter for nutrient and glandular secretions. These processes constitute the third class,—while to the fourth belong the resumption of matter by the lymphatic absorbents, and its reconveyance into the general circulation. The fifth and last class comprises the purification of the blood, by the several excretories, and the final expulsion of all such matter as is redundant, noxious, or inert. In this series, each division seems dependent on the preceding, so that if food is taken of suitable quality, and in moderate quantity, it excites the stomach and digestive powers to healthy actions only, and is elaborated into a perfect chyle, suited to repairing the wear of the system. Arrived at the heart, it excites it only to the degree of action necessary for propelling it through the pulmonary circulation; and, as no perternatural excitement is afforded by it to these vessels, the healthy action of the lungs only is performed, and sanguification is here completed. Blood thus highly animalized, is now denominated arterial, and becomes the appropriate stimulus to the right side of the heart, arterial system, and general secreting organs, which now perform their parts, and afterwards hand over the blood to the veins, deprived only of that portion of nutriment which the wants of the system required. The absorbents next take up only the matter whose place this nutriment has supplied, and deposit in the general circulation only what the various excretions are capable, by their ordinary functions, of despumating and discharging. When all the actions are thus performed, the condition of the body is that of perfect health. Nor is this a state which we are left to judge of by mere conjecture, for we are possessed of sufficient criteria by which to ascertain its existence. Of the state of the general circulation, the pulse, if duly attended to, will afford us complete evidence, while the alvine discharges will show us how far the biliary excretion is healthily performed. On both these subjects, I am aware, that we stand much in need of accurate observations, and that in both, our knowledge is very defective. I would here be understood, therefore, as alluding to the certainty these indications are capable of affording us respecting the health of the body, rather than to any, which, under the present state of our knowledge, we actually derive from them. An approach to such certainty is the chief object of my present attempt, and, I trust, the pathological observations with which this paper will conclude, will contribute to promote its attainment. Of the series of animal processes, thus divided into classes, the first is obviously that which is most liable to irregularity, from being most under the will of the individual; and we can now readily perceive how errors committed in respect of it, are continued, of necessity, through all the remaining divisions. By the increased actions induced in them, the effects of occasional excesses are speedily rectified, and health is restored, and, if these are not too frequently repeated, the powers thus resident in the constitution seem fully adequate to preserving it from suffering by slight or transient disturbances. But if, by the degree of excess committed, or the frequent repetition of it, they are inordinately excited, they then proceed from increased to morbid actions, thence to inflammatory, and thus give rise to various forms of disease, according to the degree of irritability possessed by the moving powers, and the nature of the part peculiarly affected by such preternatural excitement. It may be here objected, that, on these principles, the liver should be the organ uniformly and almost exclusively disordered in consequence of repletion; and were the excesses limited to taking in an undue proportion of food, this most probably would be generally the case. It must be recollected, however, that the body is subject to various other influences, which produce additional excitement to particular parts, such as that of cold or heated air upon the lungs,—of wine and narcotics on the brain: and by such, may either of these organs be respectively excited to inflammation, or other injurious actions, before the liver gives way. The direct effect of repletion, in producing obesity, may also be deemed deserving of notice, in order to complete the view of its consequences. But this I consider only as the increased exercise of a healthy action; and although the condition approaches nearly to disease, still the transition, from increased to morbid actions, has not in this respect actually taken place. The relief given to the constitution, too, by the redundant nutriment being thus converted into fat, affords even a security against such transition taking place; and such persons, unless they abuse their privilege, and bring on disease by other intemperances, would seem peculiarly exempt from its attacks; and some continue to enjoy such exemption, even until the enormous accumulation of fat is such as to impede the functions of some of the vital organs, and life is destroyed by the obstruction thus induced. Under such circumstances, the lungs seem peculiarly to suffer; their actions become impeded; respiration is imperfectly performed, as is manifested by the dyspnœa and purple aspect of the sufferer who dies of suffocation. This state I have witnessed in a person whose weight could not be much under forty stone; and so characteristic were the appearances, that I was enabled to foretel a speedy decease, at a time when he was apparently in possession of as good general health as he was in the habit of enjoying, and to state to his friend the way in which it would take place. The event verified the prediction, for he died very soon after, and evidently of suffocation.

It is scarcely necessary, after the explanations I have been engaged in, to anticipate any objection to the foregoing pathology, from the occurrence of bilious or inflammatory affections in people of spare habits, and apparently temperate lives; for, if by temperance is meant, the taking in only of such sustenance as is necessary for the purposes of life, it must then be clearly considered as a relative term, and as bearing a direct reference to the degree of expenditure which the active exertions of the body occasion. It can thus be readily understood, that repletion may arise, as well from diminished excretion, as increased nutrition; and that, though a person may take in only what, on a general estimate, may be deemed moderate, it may, and if exercise is insufficiently taken, unquestionably will, prove excessive to his frame, and lay the foundation of future disease.

Having thus shewn that the health of man is peculiarly assailable through the medium of the first class of animal processes, I shall now briefly consider the peculiar excitements to which each succeeding class is subjected, in order to estimate the influence of such in producing diseases, and to ascertain the degree of importance which practitioners should assign to them in regulating this treatment. It is manifest that the lungs are liable to excitement from two sources; namely, the blood circulating through them, and the air we breathe. It has been already shewn, that blood charged with fresh nutrient matter, is the appropriate stimulus to the pulmonary arteries; and it is highly probable, that the degree of excitement is proportionate to the quantity of such unassimilated nutriment conveyed to the lungs for the purpose of sanguification. The second source of excitement, or the air respired, is, fortunately for us, but little under our control. The supply of this necessary is prepared in the great elaboratory of nature; and in the use of it, we are little liable to suffer, either from erroneous judgment, capricious taste, or inordinate appetite. Besides, when noxious air is inhaled, the immediate distress thereby is such as to induce an immediate change of situation, if the person still retains the power of moving; if not, the speedy consequence is not disease but death.

Thus, it appears, that we are not very liable to impressions by means of the quality of the air we breathe; and that, although persons with delicate lungs may be sensible of slight variations therein, we have no reason for believing, that it exerts any particular influence on the great body of mankind, tending to produce disease. It must not be overlooked, however, that it is capable of producing considerable effects on the animal frame, even when not so impure as to be irrespirable. The situations wherein such effects are produced, are deep vallies, through which the currents of air are not sufficiently active for promoting a thorough circulation of it, while noxious and putrescent exhalations are continually rendering it impure. The effects themselves are not such as any one could *a priori* imagine; but the best disquisitions which the subject has undergone, seem to refer them so clearly to an impure state of the atmosphere, that I cannot doubt of their being produced by it. I allude to the extraordinary diseases of goitre and Cretinism, which are to be met with in certain vallies of the Alps and Pyrenees; the former term implying a remarkable swelling of the throat, caused by an enlargement of the thyroid gland; the latter, a species of fatuity or mental imbecility, which occurs in various degrees. Any further discussion of the subject in this place would be unsuitable, as my only object in referring to it was to shew, that considerable derangement of the system may be produced by impure states of the atmosphere.

The temperature of the air is the quality by which, in these countries, it produces its most injurious effects. And yet, although pulmonary inflammation may oftentimes be directly traced to such a cause, my own belief, founded on all that I have witnessed and reflected on respecting diseases, is that this cause would seldom have power to produce such effect, were there not an overloaded state of circulation, and a consequent readiness to undergo inflammatory action, on any adequate excitement being applied. How else can we reconcile the facts, that, from the same exposure, some shall be assailed by rheumatism; some by pneumonia; some by mere catarrh; while many shall escape altogether? This variety of effect has doubtless been assigned, and justly, to predisposition; but the precise nature of this predisposition, not being clearly defined or understood, too much stress has been laid on the exciting cause; and although the practice, in cases of obvious inflammation, has been, in general, active and correct, still it has not always been followed up with that steadiness and precision, which a more accurate knowledge of the nature of such disease, and of the state of the constitution giving rise to it, must ensure.

Arterial blood, as returned from the lungs to the left side of the heart, constitutes the proper stimulus to the arteries, and various secreting organs. These, however, are capable of being additionally excited by the whole class of diffusible stimulants, when taken into the stomach; and hence arises another fruitful source of disease, the power and effect of which, however, must still be considered with relation to a state of repletion; for, if this is not present, a casual over-excitement of the system by vinous potation, is only succeeded by proportional collapses, or exhaustion of excitability, conformably to the general law of excitement,

citement, on recovering from which, the person is again restored to his former state, without any organic disease, or permanent derangement being caused thereby. If the plethora existing is inconsiderable, and the hepatic functions are still uninjured, a drunken fit will frequently only induce an increased secretion of bile, which, flowing into the intestines, produces a temporary diarrhœa, a termination frequently known to attend such a debauch, and which, in some measure, counteracts the ill consequences thereof. If much plethora is present, and the excitement frequently repeated, either hepatic inflammation ensues, or general inflammatory fever; or undue excitement of the brain, causing phrenitis, apoplexy, or some other analogous disease; or, if this organ is not easily disturbed, then either gout, rheumatism, or some local inflammation.

If no plethora exists, then the ill consequences of this pernicious habit, though sure in their progress, are more slow in their approach. By reiterated excesses, the tone of the whole system, and of every organ, becomes impaired; their functions are languidly performed, until re-excited by the accustomed stimulus; which, though pleasurable in its immediate effects, and apparently conducive to the renovation of health and vigour, is sure to produce by repetition, even under the most favourable circumstances, an exhausted frame and premature old age, if death is not accelerated by rheumatism, gout, palsy, apoplexy, or some other inveterate form of disease. For the long exemption from such evils, which the slaves of intemperance so often undeservedly enjoy, they seem, in some measure, indebted to an effect which their intemperance itself produces, namely, a debilitated state of the stomach, deficient appetite, and impaired digestion. Thus food is sparingly taken, plethora is not induced, and the arterial actions of the system, excited by the stimulus, are therefore not prolonged beyond the temporary effort which the drunken fit occasions. And here we have a striking instance of the blindness of men to their own interests, and their ignorance of what is for their good; for the impaired appetite, to which the debauchee is so much indebted, is to him a source of deep regret, and piteous lamentation, and his efforts are strenuously exerted to strengthen his stomach by tonics; to stimulate it by cordials and aromatics, but above all, by wine, which is now to be taken on system and principle, as well as from inclination; after which, the appetite, so excited, is to be pampered and enticed by high-seasoned dishes and luxurious fare.

The fourth class of animal processes, or those performed by the absorbents in taking up the effete matter of the system, and returning it into the circulation, seems less liable to be affected by external influences than any of the foregoing, and, although we employ remedies with a view to promote absorption, it does not appear that we possess any direct power over these vessels. Their extremities are stimulated to act by the appropriate matter which it is their office to absorb, and the vessels themselves, of course, by the lymphatic fluid into which this matter is converted. Besides, medicines intended to act upon them can only reach them through the medium of the circulation, and hence the proof of direct influence seems unattainable. All we can know is, that, by the employment of certain drugs, increased absorption seems promoted, and we are left to conjecture that it may be accomplished in some such way as I formerly endeavoured to explain.

The due performance of the several excretions, or fifth and last class of animal processes, seems chiefly dependent on the blood conveyed to the excretories being in a state fitted for undergoing their respective operations. They seem also materially promoted by the degree of exercise taken, as indeed are all the secretions; for by exercise blood is propelled into the minute branches of the arteries, by which secretion is principally performed, to the great relief of the larger trunks, while by the same operation it increases the cuticular discharge, which has been already noticed as the most copious of all the excretions. The utility of exercise in inducing a free state of bowels, and the opposite tendency of sedentary habits, sufficiently prove the effect of exercise on the intestinal excretions. Indeed it seems sufficient to state, that both secretions and excretions require for their due performance a certain activity of circulation in their respective organs, and that the stimulus of exercise is that which most beneficially excites it.

Illustrations might be indefinitely multiplied, on every part of the sketch, whose delineation I have now concluded; and though it is far from perfect, still I trust it is calculated to convey conceptions, neither faint nor incorrect, respecting those operations going on within the animal frame, which are the proper objects of the physician's inquiries.

That I have interspersed pathological doctrines and remarks, in illustrating the natural and healthy functions, and thus have anticipated much of what should follow, conformably to my original purpose, will not, I trust, be deemed censurable; for it appeared to me that their introduction in such place, while it contributed to illustrate the physiology of the body, was likewise calculated to render the morbid changes it was liable to, more impressive, than if they were reserved for subsequent discussion.

(To be continued.)

X.

Case of Suppression of Urine from Stricture, succeeded by Gangrene of the Arm. By S. MARSHALL, Surgeon, Leeds.

HAVING had to treat, some time back, what I conceive to be rather a complicated case, the one morbid affection following the other in immediate succession, I herewith send you the detail of it; in hopes of eliciting from some of your more enlightened readers, an opinion how far these generally irrelevant complaints stood in the relation to each other, in the present instance, of cause and effect.

J. E. an old worn-out quarter-master, while at sea, complained, on the 15th of May, of an inability to pass the bougie, (which he had been long in the habit of doing himself, on account of several strictures in the urethra,) in order to empty the bladder. I attempted, for some time, to introduce bougies of various sizes and forms, as well as catheters, but all to no purpose. As the belly was now become tense, from the fulness of the bladder, and the patient was in severe pain, I gave directions for the warm-bath to be prepared; but as this was likely, from the gallery fire having been put out, to occupy a considerable portion of time, he was put to bed, and ordered a draught of thirty drops of laudanum, and in two hours this doze was repeated, soon after which he fell asleep. I now began to revolve in my mind which would be the most eligible mode, on the failure of the warm-bath and other means, with the increased urgency of the symptoms, of puncturing the bladder. The great height, however, of one of the strictures, and the probable disease of the prostate gland, rendered the very simple and ingenious method recommended by Mr Astley Cooper impracticable, and I determined on that by the rectum. But, happily, during the sleep of the patient, the bladder was in part emptied involuntarily; and, on waking, he was enabled to pass the bougie as well as ever, and complete the evacuation. Thus far the issue of the case was favourable; but the poor old fellow only escaped this operation, bye and bye to undergo one, in his present state of debility and emaciation, rather more formidable. He passed a tolerably easy night, discharging a little urine frequently; but in the morning, on wakening, found the use of the right arm entirely gone. On being called to him, I found the whole cubit benumbed, cold, and stiff, and not the least pulsation of the brachial artery to be perceived in any of its course; nor was I more successful in feeling that of the subclavian, in passing over the first rib. The limb, above the elbow also, was robbed, in a great measure, of its vital heat, though not so completely as the lower portion. The hand and fingers, in particular, were completely dead. The pulse of the opposite wrist was at the same time very feeble, and his general debility very great. This I immediately began to combat with a more generous and fresh diet, wine, bark, and opiates; ordering the limb affected to be constantly stuped with warm fomentations, alternated with a strong solution of camphor in rectified spirit; but the vital warmth was gone for ever; and in spite of the unremitting exhibition of a variety of the most powerful stimuli, external, and internal, the fore-arm continued entirely devoid of sense. On the third day, the fingers became livid, and soon after, by degrees, the whole hand was also discoloured. At this time he complained of soreness from the elbow to the wrist, soon after which the latter part became also livid. On the 30th of May, (having waited some time for the line of separation forming between the mortified and sound parts, and this having now manifested itself in numerous vesicles, and an irregular kind of sulcus, a little below the elbow,) I suggested to the old man the propriety of amputation; but must confess, that my motive for this step was rather the removal of a nuisance, which, from its intolerable stench, had for some days distressed the whole crew, than any expectation of seeing my tottering patient recover after it; indeed, I had, for some time, been prepared for his sinking under his excessive debility. I, however, seized a favourable opportunity, when his vital powers were somewhat recruited, and performed the operation, with the assistance of my mate, and the purser; making the first incision a little above the elbow, and finishing it, with the loss of but about two drachms of blood. The result turned out far beyond my expectation. On the fourth day the wound was in some measure healed by the first intention, and in a month was firmly and completely cicatrized; and the old man, although in rough squally weather, and near the close of a long voyage, was in better health than he had been for a long time, insomuch that he was able to resume his post in directing the steersman.

Leeds, August 2, 1813.

PART

PART II.

CRITICAL ANALYSIS.

I.

An Essay on the Utility of Blood-letting in Fever, illustrated by numerous Cases; with some Inquiry into the Seat and Nature of this Disorder. By THOMAS MILLS, M. D. Licentiate of the King and Queen's College of Physicians, one of the Physicians of St George's Fever-Hospital and Dispensary, and late of the House of Recovery and Fever-Hospital, Cork Street. 8vo. pp. 222, Dublin. Longman and Co. London. 1819.

WE never sit down to our critical labours with so much interest and alacrity, as when our attention is called to the result of a series of observations, made by the medical officer of a public institution, in illustration of some practical object: and our interest and alacrity increase, as we proceed, when we discover zeal and intelligence on the part of the author of the inquiry, and more especially when the opinions, which he illustrates, accord with our own views, and tend to the removal of certain practical prejudices, which prevail among the profession, and to the establishment of more rational principles. We have taken several opportunities of expressing our conviction, which has been forced upon us by repeated observation, in spite of the doctrines of the schools, (and the author has done us the honour of quoting us on this point) that the stimulant system of practice, in fevers of every denomination, is founded upon mistaken principles, and prejudicial in fact. The experience of every succeeding day confirms and illustrates this opinion. Nevertheless, such is the inveterate hold which the contrary doctrine maintains, not only upon the public, who long adhere to the refuse of medical hypotheses, but among the profession themselves, that it can only be loosened ed by dint of repeated lessons of instruction from respectable practitioners, whose opportunities of experimental investigation are ample and obvious, and whose writings evince the zeal and ability with which they employ them.

Our author dedicates his essay to Dr Clutterbuck, because he was first led to the practice, which he here describes, by the perusal of the elaborate work of that gentleman "on the seat and nature of fever." Dr Mills; however, does not adopt the opinion of Dr Clutterbuck, that the seat of all fevers is in the brain, nor make any attempt to refute it; but he assumes, that "the seat of fever is various; it may be seated in the brain, the lungs, the liver, the stomach, or any other organ or part of the body;" and the object of his essay is to prove, that, "in every fever there is an *inflammation* of some one or more of the viscera or other parts," and that the hypothesis of putrescency, originating in debility, is altogether erroneous.

This latter position, we apprehend, is daily losing its advocates, who must be convinced, from experience, that all the symptoms, which have been supposed to indicate its truth, are aggravated by the continuance of a stimulant system, and may be prevented, and often cured, by an evacuant and antiphlogistic plan. The converse of the position, that fever is a state of oppression from some excitement, is reasoned with considerable felicity, though not perhaps with very good taste, in the outset of Dr Mills' work. He shews that the very expedients which debilitate the body in health, and which increase the debility of persons actually exhausted by long disease, prove remedies for fever; *ergo*, he infers, "the body, in fever, must be in a state of oppression or of over-excitement:" and if the preceding members of the proposition be admitted, the inference is undeniable. The object of the essay is to prove from experiment the truth of these statements; and the reader must either withhold his credence from the copious store of evidence, which Dr Mills has adduced, or he must concede the doctrine which he maintains.

Dr Mills presents us first with a series of cases of what are commonly called brain-fever, an appellation which he adopts, as indicative of the true seat of the disease, the leading symptoms of which, as they relate to that organ, he thus recapitulates:

> "On a review of these cases, it appears that no two patients were affected exactly alike, although the leading and characteristic features were the same in all: giddiness, or pain, or weight, or fulness of the head was universally complained of; the external senses were vitiated; in some, the sense of hearing was blunted, in others rendered acute; again, the optic nerve became so irritable, that light, in any degree, caused excessive pain in the eye-balls; the remaining

senses of touch, taste, and smell were likewise affected: the obscurity or perversion of the intellectual powers appeared in every instance; one was marked by stupor, another by low or high delirium; in this patient fancy raved unrestrained by judgment; in the next, memory called to view transactions long forgotten, whilst later ideas were buried in oblivion Such was the disordered condition of the intellectual powers, the due exercise of which depends on the healthful actions of the vessels of the brain. From the symptoms now enumerated, from the flushing of the face, the throbbing of the temples, the suffusion of the eyes, the intolerance of light, and from the complaint made by each patient that his head was particularly affected, we are led to infer, that there was in all some diseased action existing in the brain; whether of an inflammatory or of a peculiar nature, is a question worthy of our most serious consideration, because, on the opinion we form on this point, depends the treatment, and consequently the probable recovery or death of the patient." p. 51.

In order to shew that this is really an inflammatory action, Dr Mills compares the symptoms, causes, successful remedies, and appearances on dissection of these fevers, with those belonging to phrenitis, and points out their similarity. He then replies to seven or eight of the ordinary objections against the opinion that fever is something different from inflammation, and, without attempting to overstrain any fact or argument, satisfactorily accounts for the great variety of symptoms that occur in different instances, both of fever and inflammation, from the various sensibility of different organs, and even of different parts of the same organ (especially the membranous and parenchymatous parts), the difference of the cause, and of the degree of violence of the attack, &c. To one objection, that "as low inflammation of the brain, lungs, liver, &c. may subsist without fever, inflammation and fever are therefore distinct diseases," he replies that this idea has arisen from the fallacious theory which prevails in chronic inflammation.

"From habit, and from want of attentive observation, inflammation and pain are so associated in our minds, that when we do not find the one, we overlook or neglect the other; yet nothing is more true, than that inflammation may subsist without pain, but it never can without fever; when, indeed, the inflammation is acute, the febrile affection is evident; when low, often obscure, in which case the practitioner and the patient are often unwilling to allow that such a disease exists, and the slight chills, the irregular heats and flushings of the face, the fulness or pain of the head or of the chest, and the frequency of the pulse, are supposed to arise from some other cause; or, the indefinite epithets, nervous or bilious, are applied to the persons so affected." p. 56.

In truth, if the prejudices of education and the weight of authority did not pervert our judgment and distort our observation, when the phenomena of febrile disease are before our eyes, let the primary seat of the disease be in what organ it may, it would be impossible to associate with any other idea, but that of local irritation, the general heat, restlessness, and distress, the parched and burning mouth, the flushing of the cheeks, the pungent heat of the skin alternating with clammy moisture and temporary chills, the augmentation of all these symptoms by taking food, especially if it be solid, though in the smallest quantity, and much more by wine or any stimulant liquor, the wiry thrill and sharpness of the pulse, however small and feeble, so different from the soft and fluent pulsation of mere debility, and the invariable temporary relief, which any local discharge from the vicinity of the diseased part, and still more any general evacuation, which is not immoderate, produces;—symptoms which the regular course of every fever exhibits, when treated in the ordinary way.

A striking contrast of this sort is exhibited by Dr Mills, after he had detailed a number of cases, in which small blood-lettings and daily cathartics had speedily relieved all such symptoms, and obviously cut short the fever, by the description of a case, which occurred in private practice, where the regular routine was pursued, in spite of the augmenting proofs of local congestion, until death ensued. His description, in the second of the following paragraphs, is a satire upon the ordinary practice in fever, in proportion to its fidelity.

"The present case deserves particular attention, because cases of this kind are often met with, and because the remedies usually prescribed are here enumerated: that the brain was the organ chiefly concerned, and that the disease was inflammatory, would appear from the constant headache, the delirium, the intolerance of light, flushed face and the suffusion of the eyes; and that suppuration or compression of the brain supervened on such inflammatory action is manifest from the strabismus, the dilatation of the pupils, the convulsive twitchings of the face, and the subsultus tendinum; this is farther confirmed by the paralytic affection of the eye-lid, of the muscles of deglutition, and of the sphincters of the bladder and rectum; a train of symptoms observed to arise from apoplexy, from phrenitis, from hydrocephalus internus, and from blows on the cranium.

"According to the view of the disease now taken, and from the beneficial effects of blood-letting and other evacuants in similar cases, it is obvious that the wine and other stimulants here administered must have proved injurious: indeed, with the exception of the purgatives, almost every remedy prescribed was nugatory or hurtful; and in their administration no fixed plan was pursued; no rational principle acted on; each day some new symptom arose, or some former one was aggravated, and each day some new remedy was exhibited, or the dose of the former one was increased—pain of the head came on, a blister was applied upon the nape of the neck; the breathing became oppressed, accompanied by cough, a blister was applied between the shoulders; delirium and imperfect vision supervened, and the headache increased; the head was now shaved, and the occiput and vertex were blistered; subsultus tendinum and other convulsive affections arose, attended by great prostration of strength; blisters were then applied to the legs—and such is the usual routine, in as far as regards the use of blisters, and such are the reasons for which they are commonly applied. As refrigerants, the saline draughts were administered; camphor draughts as antispasmodic and antiseptic; as a sudorific and specific, the antimonial powder was exhibited; the cordial and alkaline draughts were given as stimulants and restoratives; and the various cathartics and injections to evacuate the bowels and bladder. Wine of different kinds and in different quantities was employed to support the strength and to correct the putrescency of the fluids; the petechiæ notwithstanding increased, and the prostration of strength became greater; recourse was now had to the use of brandy, spices and the alkalis, but all in vain, the patient sunk; nor is this to be wondered at; the disease consisted in over-excitement, the debility was the consequence of such excitement; the wine, brandy, and other stimulants, therefore, tended to aggravate, not to relieve the disease." p. 25-7.

Such being the opinions of the author, he is anxious to recommend the rigid antiphlogistic practice, of which he has detailed numerous successful examples. With a degree of uniformity, which at least evinces his confidence in the plan, he commences, in all the cases of brain-fever, with blood-letting and purging, which, in fact, constitute the sum total of his remedies. The reader may perhaps be disposed to doubt, indeed, which of these expedients is the most efficient: for the blood-letting is never extended beyond six ounces, and more frequently is only ordered to the extent of four, less than which, however, is sometimes found to induce a tendency to syncope, and then it is stated to be invariably very beneficial; while the cathartic, consisting of an infusion of senna, with the sulphate of magnesia, and tincture of jalap, is persevered in daily, so long as the febrile symptoms continue unremitting. It may be supposed, therefore, that the relief is principally to be ascribed to the purging, which, it is now pretty well understood, is adequate to the cure of fever, especially when pursued from the early stage. In two or three instances, however, and particularly in the case of John Purcell, (p. 41.) a sort of comparison was accidentally instituted, on which the author makes the following remarks:

"The efficacy of blood-letting, and the advantages it possesses over the purgative plan of treatment, are here fully exemplified: from fear and obstinacy this patient would not suffer himself to be blooded during the two first days he was in the hospital; on each a brisk cathartic was administered, and six or eight dejections severally followed; the headache, watchfulness, anxiety, and general pains and soreness, notwithstanding, continued; these symptoms, however, did not seem to be aggravated—they were not diminished. On the third day after his admission, and the ninth of his illness, after much persuasion, blood was taken away to the amount of six ounces; immediate relief followed, and he called for food; the fever was broken, not subdued; a second bleeding was requisite; to this he would not submit till two more days had elapsed, in which interval recourse was again had to purgatives; and the purgatives again had the effect of checking the progress of the disease, but not of curing it. On the 12th he was rather desirous to be blooded;" (and it was done,) "the day following he was convalescent." p. 43.

He considers the pulse as affording a very equivocal guide for the treatment of this fever, inasmuch as it generally rises after the evacuation; and he ascribes the appearance of petechiæ, with Sydenham, Rush, and some others whom he quotes, to the increase of vascular action: the blood, he affirms, commonly exhibits more or less of the inflammatory crust.

The author next proceeds to treat of those modifications of low fever, which he denominates pulmonic, hepatic, gastric, and enteritic, and of which he has given an ample detail of cases, preceded (except in the case of pulmonic fever, which is commonly known by the name of pneumonia typhodes,) by a general description of the symptoms peculiar to each. The *hepatic* fever is described as being characterized, in addition to the ordinary phenomena of fever, by a peculiarly vitiated taste, with a foul and yellow, or saffron-coloured tongue, at least in its centre; by constipation, or by tormina and tenesmus of the bowels, with dark fetid discharges, that are compared to chopped spinage, grass, the grounds of chocolate, tar, &c. and not unfrequently by hæmorrhage from the intestines, commonly of a black and grumous appearance, but sometimes florid (a hæmorrhage, which is not alarming, and readily relieved by purgatives). There is a confusion of ideas rather than delirium; and more frequently a sense of weight or fulness, than of pain in the head; and soreness, heat, or pain in one or both hypochondria, sometimes, however, not complained of by the patient, except upon examination and pressure. The *gastric* fever, by which he understands that in which the stomach is the principal seat of disease, is described as exhibiting, besides many symptoms in common with other fevers, an almost constant nausea, frequent retching and vomiting, with a sense of soreness, weight, and heat in the epigastrium, a desire for cold drinks, and great loathing of food. The head, especially the forehead, is affected slightly, as in the former, with confusion of ideas, and weight, sometimes with stupor and low delirium; and there is much despondency and sighing, with sudden variations of the countenance; the tongue and gums are slightly inflamed, and sometimes aphthous, and the bowels constipated. In these fevers, the author remarks a circumstance, which contributes to the diagnosis between them and the cephalic fevers, sometimes occurs, viz. when a patient is roused from the low delirium under which he labours, he is collected and rational; whereas in the cephalic fevers, the intellectual powers are so disturbed, that the patient can with difficulty be excited to give a distinct answer, or, if excited, immediately relapses into a state of stupor or delirium. The *enteritic* fever, or that in which the bowels are its principal seat, is justly stated to be commonly an insidious and always a dangerous disease, though occasionally it is well defined, and proceeds with rapidity. It has many symptoms in common with the hepatic and gastric fevers, and indeed, as far as we have observed, is not very easily distinguished from them. There is generally considerable uneasiness, heat, soreness, or actual pain, referred to the region of the umbilicus, or lower, and increased by pressure, or by coughing, vomiting, sneezing, and a deep inspiration. Dr Mills states that the bowels are usually constipated, and the feces at times are blackish or tar-like; but our own observation would lead us to say, that there is often a diarrhœa, with scanty, thin, mud-coloured stools, at least when the disease has made any progress, and some tenesmus. Great depression of strength and spirits, sleeplessness, and anxiety accompany this affection, and there is some confusion and wandering of the thoughts; but the countenance has generally preserved, in the cases we have seen, a considerable clearness of expression. The temperature of the body, Dr Mills remarks, varies; it is at one time below, and at another above the natural standard; and there is a morbid sensibility to all external impressions, especially a soreness and tenderness of the flesh. We do not think, however, that this is exclusively a characteristic of bowel-fever. Dissection, in two or three cases that we have examined, exhibited ulceration of the villous coat of the lower part of the small intestines, and appearances of slow inflammation in other spots, which were visible by a brownish shade, even externally, through the peritoneal coat; at the same time no appearances of disease were observable in the brain, or any other organs. In three dissections, related by Dr Mills, the ilium, and even the jejunum and duodenum, were the seat of patches of inflammation, with gangrenous spots.—Dr Mills also describes a *cardiac* fever, in which the distress about the præcordia is extreme, accompanied by palpitations, with laborious breathing, and irregular pulse.

The author treats all these fevers in a similar manner as the cephalic fevers, relying principally upon moderate venesection, and cathartics, but occasionally superadding the use of blisters and local bleeding, and in the abdominal fevers, generally directing fomentations of the belly at intervals of a few hours, which, he is of opinion, contribute materially to relieve the local congestions of the viscera, and to expedite the cure. He had frequently pointed out, in the course of his detail of the cases, that the eruptions of petechiæ and also of miliary vesicles, generally decline rapidly, and disappear after blood-letting, and consequently denies that they can be the result of putrescency originating in debility, and believes them both to be occasioned by over-excitement of the circulation.

In contemplating a system of practice so directly the reverse of the general doctrines of the schools, and the general routine of the profession, there is something painful and perplexing to the mind. For we are compelled to admit that there must be some gross misapprehension of facts, some grievous misconception of the phenomena of the diseases in question, and of the operation of the medicines administered for their cure, on the part of those who maintain the one or the other of these opposite opinions: and the practical consequences, to which such mistake must have led, appear to be of most fatal import. Or, if we admit of another alternative, the dilemma is still more painful; namely, that neither of the methods of treatment have had any material influence upon the progress of the diseases in question; or, in other words, that medicine, in these cases, is inert and useless. The agents employed, however, are too powerful to allow of this inference; and, therefore, we are left to explain as well as we can the source of the mistake, committed by the advocates for one or the other of the opinions in question. With respect to the fact, of the superior success of the antiphlogistic practice, Dr Mills adduces very strong proof. He states from an examination of the Report of the Committee of the House of Recovery and Fever-hospital in Cork Street, Dublin, during a period of seven years, that the average proportion of deaths to recoveries was about as *one* to *eleven*. This we know to have been about the usual average in some similar institutions in England; but it is of course very far below the average of mortality in private practice. But the following is the statement of the result of the practice, described in this volume, under the direction of Dr Mills, in 1810. Namely, of 209 patients, in the institution just mentioned, of which number there were

45 cases of cephalic fever,
34 ——— hepatic,
31 ——— pulmonic,
25 ——— enteritic,
15 ——— gastritic,
11 ——— cardiac,
3 ——— peritoneal,
5 ——— remittent,
48 ——— mixed fever,

Died,
2 of cephalic fever,
2 — pulmonic,
1 — enteritic,
1 — hepatic,
8 — mixed fever.

Here the average proportion of deaths to recoveries was somewhat less than 1 in 23. Again in St George's Dispensary and Fever-hospital, during three years, the author treated 91 patients with blood-letting and purging, of whom

18 had cephalic fever,
14 — hepatic,
10 — pulmonic,
9 — gastric,
8 — enteritic,
4 — cardiac,
2 — peritoneal,
8 — remittent,
18 — mixed fever.

Died,
4 of mixed fever.

This makes the deaths to the recoveries not quite 1 in 25.

Presuming that these are candid and correct statements, we may deem them potent arguments in favour of the advantages of the antiphlogistic treatment of fever. But how are we to account for the conviction, which intelligent practitioners have expressed, of the success of the treatment of fever by wine and other stimulants? Perhaps it is yet to be explained, whether, under different conditions of the animal economy, similar diseases do not bear and even require remedies of different powers; whether, for instance, in the pure and airy wards of a house of recovery, there is not a much higher inflammatory tendency of all the symptoms of fever, than under the depression of a close and heated room, with a load of bed-clothes, the stifling of curtains, and other debilitating causes? We are rather disposed to believe, from occasional observation of the same patient under both circumstances, that some degree of this difference really occurs; though it would require extensive comparative experiments to determine the fact. But that, wherever the advantages of free ventilation and coolness are fully employed, a patient, under every form of fever, is materially injured by a cordial and stimulant treatment, we are most fully persuaded from ample observation. The aggravation of symptoms, even in the last stages of typhus, especially where the head is much concerned, we have frequently witnessed, and we accord with Dr Mills in his general observations on the effects of wine.

> "Wine stimulates the nerves and fibres of the palate, fauces, œsophagus, and stomach; the vascular system is excited, the pulse is quickened, the face is flushed, and the spirits are exhilarated; the skin becomes hot, the tongue parched, the thirst urgent; such is the effect of a certain quantity of wine; increase this quantity, and the temples throb, the head aches, and the eyes become suffused; next succeed stupor, vertigo, prostration of strength, and sometimes apoplexy, mania, epilepsy, fever, or inflammation of one or more of the viscera; such are the stimulating effects of wine, which, in the first instance, gives a temporary degree of strength, in the second, produces debility and the diseases of over-excitement. Can such a remedy be administered with safety in such a disease as fever? That some recover who have taken largely of wine, no one will question; the recovery, however, cannot justly be ascribed to the wine, but to the mildness of the attack, the strength of the constitution, or the counter operation of the medicines usually exhibited; we may also remark, that treat our patients as we will, they frequently recover; and the question is not always, what medicine was most useful, but what was least pernicious." p. 67.

We must be all aware, how easily we explain away the bad symptoms in a dangerous disease, by referring them to its violence, while we follow the treatment which we have been taught to believe that both rational theory and long-established experience prove to be the best that can be adopted; and how difficult it is to rid ourselves of the fears and apprehensions against certain modes of practice, the dangers of which have been often sounded in our ears. It was thus that our predecessors continued to be convinced, that the admission of cold was highly detrimental to patients in small-pox and scarlet-fever; they were satisfied, both from theory and what they supposed to be observation, (but they mistook prejudice for both) that *heating* was the most successful cure for these burning and inflammatory fevers, and they could produce a host of authorities in support of their opinions. So it is in some measure with ourselves: and the circumstance ought to make us at least diffident of our knowledge, and open to the consideration of facts, however opposite to our general reasoning. Every practitioner of observation, who is conversant with febrile diseases, must, we think, have been gradually compelled to modify his notions respecting the operation of medicines in these diseases, as his experience extended. He leaves the schools, if not with apprehensions of putrescency, at least with fears of a prostration of strength, for which wine and cordials are deemed the necessary remedies, and evacuants are believed to be pregnant with danger: he believes that fever is a *general* disease of the vital powers, and not symptomatic of any local derangement, and that all local remedies are useless, except when local symptoms become extremely urgent. If he is called upon to treat fever in its onset, he ventures upon the evacuations of an emetic and a cathartic, he confines the patient to a cool room and a light aqueous regimen, and he commonly succeeds in preventing the occurrence of all untoward symptoms, and only finds cordials useful in restoring the strength of the convalescent. But if his patient has been neglected or maltreated in the early stage, and his attendance is not required till the bad symptoms have already appeared, he begins with his wine and camphor, which he increases in quantity and power in proportion as the symptoms of disordered sensorium and alimentary canal are aggravated: if the constitution resists both the excitement of the disease, and of the remedies, he considers his medicines as having accomplished what he had been taught to expect: but a little more experience shews him, that a very large majority of the patients, whom he first prescribes for at this late stage of the disease, become worse daily, and die under a state of stupor, bordering upon the apoplectic, with eyes at first red and ferrety, and afterwards glazed and swimming in a mucous or purulent discharge: after witnessing this scene again and again, and finding that the recoveries, which he witnesses, occur chiefly in those whom he saw early, and treated antiphlogistically, he begins to reflect upon the nature of those symptoms, which the evacuant system commonly *prevents*, and begins to feel his way, by withholding stimuli, by venturing upon local or gentle evacuations, until he discovers, that the same system, cautiously and judiciously adapted to circumstances, though it must be frequently unsuccessful (where organic mischief is already advanced) yet enables him to increase the number of his *cures*. In the course of his timid experiments, against the authority of his masters, he perhaps meets with some bolder or more experienced practitioner, some Currie, or Hamilton, who confirms his conjectures respecting the safety or advantage of cold washing and free purging, and then he throws off the shackles of school authority, and thinks boldly for himself. Such, we are persuaded, is the progress of personal observation in many individuals; and the value of such a treatise, as this of Dr

Mills, consists in contributing to strengthen the half-formed inferences of cautious observers, who will adopt the practice according to their own previous views, without running headlong into an extreme, because they have been often disappointed by the opposite doctrine.

We will acknowledge, for ourselves, however, that we were a little surprised at the apparent success, which our author has experienced, by a practice so uniformly and steadily purgative and evacuant, under all the varieties of fever. In the cases purely *cephalic*, and in those that are *hepatic*, there can be little ground for scepticism, as to the general benefit of this treatment; but in its application to the *gastric* and especially to the *enteritic* fevers, we are disposed to think that the author has extended a favourite doctrine farther than a cautious induction would have borne him out; we mean as to the continued employment of active purgatives. It has appeared to us, that the determination of the symptoms, which indicate or prohibit active purgation in fever, is a matter of considerable difficulty; for that the symptoms are occasionally aggravated greatly by such purgation, we have had many opportunities of witnessing; and that this has been decidedly the case in fever, in which the small intestines were the only seat of perceptible disease, we have had two or three occasions of determining by dissection. In both the enteritic and gastric forms, indeed, there is often a troublesome diarrhœa; or, if the bowels were previously constipated, a diarrhœa, which is very unmanageable, follows the operation of a purgative, and is accompanied by great restlessness, by frequent vivid flushings of the face, and by a dry, glazed, and tumid tongue, which cannot be protruded beyond the teeth. That a moderate bleeding might be beneficial in this state is perhaps not improbable; but it is often accompanied by an extremely feeble pulse, and a depression of spirits and strength that are almost unknown in other fevers, where the head is not primarily affected.

Dr Mills arranges his materials, writes, and above all punctuates, like a person unpractised in literary composition; and his work would have appeared to greater advantage, if he had submitted the MS. or consigned the superintendence of the press, to some friend, more habituated to the practical part of literature than himself. The valuable matter which it contains, however, entitles it to the attention and due consideration of the experienced and thinking part of the profession; while the thoughtless advocates of mere novelty, with whom the name of a disease is equal to a chapter of symptoms, would perhaps be more harmless, without such a book in their hands.

II.

An Introduction to Medical Literature, including a System of Practical Nosology. Intended as a Guide to Students and an Assistant to Practitioners. Together with detached Essays, on the Study of Physic, on Classification, on Chemical Affinities, on Animal Chemistry, on the Blood, and on the Medical Effects of Climates. By THOMAS YOUNG, M. D. F. R. and L. S. Fellow of the Royal College of Physicians, and Physician to St George's Hospital. 8vo. pp. 586. Underwood and Blacks, London, 1813.

If we have experienced considerable disappointment in the perusal of this elaborate volume, it may partly be attributed to the circumstance, that our expectations had been previously raised to a high pitch, by the splendid eulogium which some injudicious friend, apparently possessed of more zeal in favour of the author, than of sound medical knowledge, has thought proper to pass upon the work, in a recent London review *. Such partial and exaggerated praise is pregnant with injustice both to the author and the public, and savours much of the vulgar art of *puffing*, which is so well understood in these venal times. The author himself, indeed, has disclaimed all pretensions to that perfection, which his friend ascribes to his publication, as " absolutely unattainable in a work of this kind ;" *(pref.)* and he cannot, therefore, be gratified, or even flattered, by what himself has averred to be untrue.

In thus deprecating extravagant praises, we are far from intending to cast a general censure, or to refuse the claim of real utility to the volume before us. It will prove of unquestionable value as " a guide to students ;" though as " an assistant to practitioners," its utility may be more problematical. We think, however, that it might have been made more useful, for its former purpose, by a little more labour, by which its contents might have been limited to the objects of a mere bibliotheca, and at the same time extended so as to form a more complete and copious body of reference ; for it is upon this ground alone, we conceive, that its usefulness rests; and not upon its detached essays, which are excrescences in such a work; nor upon its system of nosology, which does not appear to be calculated to obviate the imperfections of other systems, nor to facilitate the practical discrimination of diseases.

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* Quarterly Review for January or February 1813.

The non-existence of any work upon a similar plan in the *English language* is stated by the author, in the preface, "as an apology for its appearing with many imperfections." But we cannot perceive the necessity, or the advantages of having a work in our vernacular tongue, which consists principally of references to publications in foreign or dead languages. Any student, who is desirous of consulting, or capable of perusing, the majority of the books referred to, which are in the Latin, French, and German languages, must be perfectly indifferent in which of these tongues the critical observations are conveyed. At all events, few persons can be in want of such an index of reference, who are not masters of that common language of the learned, the Latin; and therefore equally capable of deriving benefit from the Bibliotheca of Haller, and Ploucquet.

The preliminary essay, on the study of physic, contains many sensible observations, and some rational directions for the regulation of the time and pursuits of the student, a considerable portion of it consisting of a translation of part of an essay of Professor Vogel on the same subject. It appears to us, however, that Dr Young has not given a correct estimate of the value of attendance on hospitals and other public institutions, either for the benefit of the mere tyro, or of the young physician. In apportioning the three years, which he recommends to be dedicated to studies strictly medical, attendance at an hospital is advised in the second year only; and as to the obtaining a subsequent appointment as physician to an establishment of that kind, he seems to view it only as it may contribute to success in obtaining patients and public fame. But if it be true, as he seems to believe, "that physic is one of those departments, in which there is frequent necessity for the exercise of an incommunicable faculty of judgment, and a sagacity, which may be called transcendental, as extending beyond the simple combination of all that can be taught by precept," (p. 5.) how is this intuitive and unteachable acuteness of discrimination to be acquired? or is it a pure *gift* of nature, a mere instinct, which is "prior to instruction, and independent of experience?" We are persuaded that it is not instinctive, and that it is an acquisition not to be obtained solely, as Dr Young affirms, by "an extensive range of elementary study," but by such a range of study, directed to and followed by an unremitted attendance upon the sick, and by a careful personal observation of the whole course and progress of diseases, first under the direction of a tutor, and subsequently under our own responsibility. No precept, no courses of lectures, no literature, or philosophy, though they must lay the foundation, can furnish the superstructure of this *experience*, of which every individual must create in a great degree his own share: and he who thinks that one year's attendance on an hospital, during his pupillage, is sufficient; or who looks to an appointment in a public institution, during his term of waiting for employment, as a mere medium of public notoriety, will never merit that fame, nor obtain possession of that incommunicable sagacity before mentioned. As auxiliaries, literature and the sciences are indispensably necessary to procure that degree of mental cultivation, by which experience *may* be acquired; but it is only by patient observation that this experience *can* be acquired. "Ista naturæ rerum contemplatio, quamvis non faciat medicum, *aptiorem* tamen *medicinæ* reddit." In speaking lightly of the importance of the clinical lectures of Edinburgh, Dr Young seems to have omitted the consideration of the regular view of the progress of disease in the wards of the Infirmary, which renders them valuable only to those who avail themselves of it. In a word, we are persuaded, that, from the time when some first principles are obtained to the end of his life, the medical inquirer cannot be too attentively or too frequently investigating the phenomena of disease.

The essay on classification might have been omitted without detriment to the work, as it is little more than an abstract, translated from the Philosophia Botanica of Linnæus, a work in every body's hands. Sound and incontrovertible as the rules proposed by that great naturalist are, they are more applicable to the classification of the objects of natural history, than to an arrangement of diseases. For the generic and specific characters of plants and animals preserve a great degree of uniformity; even their varieties occur with considerable regularity; and a hybrid intermixture is very rare. But it is far otherwise with diseases, especially of the chronic class: their varieties are almost innumerable. The congeries of symptoms vary perpetually, from the paucity or multiplicity of the organs diseased, from the influence of one organ upon another by contiguity or sympathy, from the various operation of the same exciting cause upon different constitutions, &c.; so that it is extremely difficult to constitute a generic character, that shall comprehend all the species and varieties which should be arranged under it. And hence, no doubt, the imperfection of all the nosological arrangements hitherto devised, not excepting that of the father of classification himself.

At the 41st page, the chief business of the work, the "introduction to medical literature," commences. Though we shall have occasion to express our sense of the value of this part of the work; yet we cannot but point out some drawbacks to the praise of unparalleled industry and extreme discrimination, which has been lavished upon it. The divisions or heads, under which the references are arranged, are not always perspicuous, the character of the different works is seldom stated, except in a quotation from a German writer, Rothe, from whose "Handbuch für die medicinische Litteratur," Dr Young seems to have copied largely; the omissions of works of value, in our opinion, are not few; the catalogue of references is again and again interrupted by lists of names of chemical substances, anatomical distinctions, &c., the utility of which is very questionable; and at the end of each subdivision, there is frequently a long list of the names of authors, without any reference to their works, which seems to be superfluous. Among the references on the subject of "Medical Literature," we are surprised to find no mention of the admirable articles of Ackermann, in the recent edition of Fabricius's Bibliotheca Græca, or of the "Historia Medicinæ" of Schultz: and, under "Medical Biography," the only book mentioned is Hutchinson's Biographia Medica," a work not only "deficient in literary information," but in which the omissions of important characters are exceedingly numerous; while the able and copious "Dictionnaire Historique" of Eloy is unnoticed, as well as the brief but valuable "Biographical Memoirs of Medicine" by Dr Aikin.

On the subject of chemistry, after referring to about a dozen books on "theoretical chemistry in general," the author enumerates seventy-five names of persons who have written something upon that science; and after giving a tabular arrangement of particular substances and their properties, according to the new electro-chemical classification, we are presented with such interesting paragraphs, as the following

"APPARATUS.

"Weights. Measures. Vessels. Furnaces. Fuel. Baths. Lutes. Trituration; On bell-metal mortars. Dunc. Med Com. vii. 303. Levigation. Elutriation. Exsiccation. Filtration. Evaporation. Crystallization. Distillation. Sublimation.

"PREPARATIONS.

"Acids. Metals and their salts; Chenevix, Phil. Trans. 1801. 375. Alkalis and their salts; Nooth's apparatus. Ph. Tr. 1775. 59. Earths and their salts. Sulfurs and sulfurets. Vegetable substances: Oils; Essences or distilled oils; distilled waters; Infusions;

Decoctions; Mucilages; Extracts; Mixtures; Spirits; Tinctures; Ethereal liquids; Wines; Vinegars; Honeys; Syrups; Confections; Powders; Pills; Cataplasms. Animal Substances: Plasters; Cerates; Ointments; Liniments." p. 69.

This naked enumeration of names, like that of the surnames of the seventy-five chemists above mentioned, and of numberless others, and still more of those of all the individual bones, and muscles, arteries, veins, and nerves, and of all their branches and subdivisions, throughout the body, under the head of anatomy, might afford a display of the mnemonic talents of one of Mr Feinagle's pupils, but it is surely a mere waste of paper. On the suject of physiology, however, the references are copious and valuable, under the distinct and numerous subdivisions of the subject, which the author has made, according to the different organs and functions.

Previous to the commencement of his nosology, the author gives a series of references to practical treatises, under the heads of general and miscellaneous works. Surgery—morbid appearances—local affections—relating to particular ages and sexes—to employments—to climates—exotic, popular, veterinary, and forensic medicine. In most of these articles, the references are copious: under the first head, however, there is necessarily much repetition of those which were given under the heads, of "general works," and "works of single authors," in the early part of the volume; and the division of "local affections," is very scanty, as well as that of "exotic medicine." This last, indeed, is a superfluous article; since we find references to the diseases "of climates," immediately preceding it, p. 136, and again, at equal length, p. 417. repetitions which are perplexing, and surely unnecessary.

The most important part of a bibliotheca of medical literature relates to the pathology and therapeutics of particular diseases, and the arrangement of such a collection may be constructed upon two plans; viz. upon an alphabetical disposition, or a nosological classification of the subjects. The advantages of the alphabetical arrangement appear to us to be considerable; and it is not perhaps the least of these, that the merest tyro in medical science is enabled to find the subject of his inquiry, without any previous knowledge of the principles of any particular nosological system. We were, therefore, somewhat surprised to find Dr Young stating the following objection to the alphabetical plan, as exemplified in the "most extensive and inestimable index" to medical literature, furnished us by the industry of Ploucquet; viz. that it "leaves him who consults it always in uncertainty whether he may not have failed of obtaining a considerable part of the information which it contains, for want of knowing under what appellation he ought to look for it." (*pref.* ix.) A student must be very little qualified to consult a book of reference of this nature, who is ignorant of the ordinary nomenclature of medicine; and when he is in doubt, the constant reference to synonimous words, and to the terms which bear a direct relation to the same subject, such as the work of Ploucquet exhibits, will commonly be a sufficient guide. At any rate, it appears to be a singular mode of obviating such a difficulty, not only to invent a new arrangement of diseases, but a new phraseology, discarding altogether, or converting into secondary and trivial names, the generic appellations which have been handed down to us from the infancy of our art, adopted in the nosological systems of our predecessors and contemporaries, and received into the schools of every country, so as to have become the common language of medicine throughout the world. It will scarcely facilitate the progress of the ordinary inquirer, for example, if he is investigating the nature of scarlet-fever, or of the thrush, that he must search for them, together with the yellow-fever and the plague, among the species of typhus; or if he wishes to study cataract, that he must look for it among the species of Phtharma, in the order Paraphymata, of the class Paramorphiæ, where it is associated with rickets, and the ossifications of membranes and muscles. But let us examine the principles of this nosology more closely.

The study of nosology is altogether nugatory, if it do not lead to the accurate discrimination of diseases; and however logically the system may be contrived, or however accordant with the Linnæan philosophy, if its fundamental principles be founded on speculative opinions, and not deduced from sound observation of facts, if the analogies upon which the groups are associated be gratuitous and hypothetical, and not the result of established experience, it is vain to denominate the system a *practical* one, since it is neither deduced from, nor applicable to practice. Notwithstanding the censure, which Dr Young has passed upon the system of Dr Cullen, that "his genera, his orders, and his classes, are lamentably deficient in the essential qualities of a logical and systematical method;" we are satisfied with the praise that he has expressed, viz. that "his merit in this department of science is confined to the curtailment of some of the redundancies of Sauvages, and to the *correct description* and *distinction* of a certain number of species of disease." *pref.* iii. iv. This is the end and purpose of the nosologist: but Dr Young appears to have adopted a different view of the matter; he has endeavoured to combine by forced analogies, and to establish new relationships of disease; his aim has been to diminish the number of genera and to multiply species, and thus to render obscure that palpable source of discrimination, connected with the difference of generic names; and the tendency of his classification is to withdraw the attention from particular circumstances, and fix it upon generals.

It appears to us, indeed, that this nosological system is a singular specimen of the self-deception of a logician, who, in his attention to words, loses sight of things, and when he has framed a nomenclature, supposes that he has designated the essential qualities of the objects before him. Admitting the correctness of his *genera*, we must allow that our author has succeeded in the formation of a system, more strictly methodized, according to the rules of classification, than those of his predecessors; and that he may justly put forth his claim of success, when he assumes, that "notwithstanding the irregularities which embarrass the classification of diseases, he has, in general, been able to accommodate the nosological arrangement, which he has ventured to propose, to the strictest rules of the Linnæan philosophy." *pref.* v. But what avails this success, if it is not deduced from fact and sound observation? Yet if we look to the formation of his new and arbitrary genera, we find them altogether at variance with both. They have been established, as the author remarks respecting nosology in general, for the sake of convenience, and not from the strong and immutable characteristics of nature. By sweeping generalizations, made in the closet, and not at the bedside of the sick with the specimens before him, the author has conjoined diseases, the analogies of which are of the slightest kind, or merely hypothetical and gratuitous, as in the case of thrush and yellow-fever; or they are the analogies of contrast (if we may so express it) as in the softening bones and ossifying muscles of the genus, Phtharma, above alluded to. In fact, he has set no limits to this wide and arbitrary generalization; and the congeries of various diseases, which he has strung together, calling them species of the same genus, and designating them by one common name, are, in some instances, more incongruous than any association of genera, that the hypotheses of spasm and collapse of sthenia and asthenia, of volition and sensation, ever brought together under any order or class. The authors of these classifications were misled by framing hypotheses, but Dr Young by the logic of *names*, of which alone he has in many instances made a classification, and not of the diseases, which they should designate.

The three genera of continued fever, inflammatory, mixed, (synochus,) and typhous fever, are sufficiently definite in the ordinary language of nosologists, and in the common acceptation of medical men. But what do they become in the hands of Dr

Young? The first, which he calls Cauma, includes twenty-six species, among which are simple inflammatory fever, active hæmorrhages, gout, rheumatism, *boils*, measles, and all the acute inflammations in *itis!* while Synochus, comprises simple bilious fever, the *yellow-fever of North America*, miliary rash, small-pox, cow-pox, and chicken-pox! and Typhus is the generic name for nervous fever, putrid or jail-fever, *yellow-fever of the West Indies*, the *thrush* (!), scarlatina, pemphigus, and the plague!—Again, hiccup, sneezing, asthma, hooping-cough, &c. are brought together as one disease, and called Pneusis; because, forsooth, they have this circumstance in common, (and nothing else) namely, "*irregular action* of the muscles concerned in respiration!"—Sixteen kinds of solid tumor, from corns, warts, and pimples, up to exostosis, ancylosis, phlegmatia dolens, and morbid indurations of the glands and viscera, constitute the genus, Ecphyma; and Apostema comprehends all confined collections of pus, from the cutaneous pustule to empyema and psoas abscess. Thus also a very convenient genus, Parasitismus, comprises every kind of insect, worm, and larva, that infests the human body, internally or externally: and, in like manner, each order of Dr Willan's arrangement of cutaneous diseases is melted down into a genus; so that all the vesicular diseases, herpes, iris, miliaria, eczema, aphtha, chicken-pox, and the mercurial rash, become only different species of Cystisma; scalled head, itch, boils, impetigo, &c. receive the common denomination, Phlysis; and warts, gutta rosea, noli me tangere, yaws, and elephantiasis, the mildest and the most terrible of diseases, are children of the same family, which bears the name of Phymatosis!

In constituting such extensive groups of diseases into single genera, where the individuals exhibit such a multitude of striking and remarkable points of distinction, and scarcely any obvious mark of affinity, surely that leading rule, that "each genus is commonly characterized by some decided singularity of form," (§ 171, page 28.) is set at defiance. We can scarcely conceive that an author of logical and philosophical habits, could have been induced to work up a system composed of genera so purely *nominal*, as these appear to us to be. We shall not dwell upon the irregularities of placing the same disease in two places in the arrangement, without any reference to each other, though this is occasionally marked. Gout, for instance, is Cauma podagricum, in the class Parhæmasiæ, or sanguine diseases, and Podagra arthritis, among the Pareccrises, or secretory diseases. Thus also the following seem to be synonimes, Hydrops bulla, and Pompholygmus pompholyx; Ecphyma papula, and Licheniasis; Ecphyma verruca, and Phymatosis verrucosa; Profusio subcutanea and

Exanthisma purpura; &c. The propriety of arranging Venenatio (poisoning,) and Parasitismus, among the Ectopiae, (or *displacements*,) class V. is not very obvious, even when the title of the class is interpreted, "Mechanical affections independent of the vital powers."

Under all these comprehensive genera, and the multitudinous species and varieties, into which they are of course divided, Dr Young has however accumulated a great mass of references to express treatises, or detached papers, which treat of almost all the subjects respectively, the collection and arrangement of which can only have been accomplished by great industry, even with the publications of Ploucquet, Rothe, and others, before him; and, as far as our perusal will enable us to judge, the selection has been made with considerable judgment. Notwithstanding, therefore, the objectionable principles of the nosology, this portion of the work must be considered as possessing a solid value, which entitles it to a place in the library of every medical scholar, to whom the work of Ploucquet may be inaccessible. In several respects, indeed, its value is not superseded even by that stupendous work, especially as it brings down the index of English medical literature, and particularly that of the periodical journals and collections of essays, to a very late period.

The subject of therapeutics,—we beg pardon, of "Acology,"—follows; and an arrangement of all the agents employed in medicine is given. The subject is divided into two classes, "sensible agents," and "insensible agents," the latter of which comprehends only *specifics*, or medicines "curing diseases without any perceptible connection between the immediate effect and the benefit obtained." The sensible agents comprise all other means of influencing the living body, and they are subdivided into I. *Mechanical* agents, viz. 1. climates, 2. habits, 3. clothing, 4. instruments and operations. II. *Chemical* and *Vital* agents, i. e. *Pharmacology*, including the materia medica and dietetics. The literature, (or references,) under all these heads, and under that of Pharmacology in General, is very ample, and usefully subdivided. The author then proceeds to give a detail of all the articles of the materia medica, under the heads of their respective properties, including also a list of the officinal preparations, and a statement of the dose of each, with references to authorities respecting the qualities, &c. of all the articles of importance. The chemical agents include, Caustics, Antiseptics, Antidotes, (calculated to neutralize offending substances), Demulcents, and Diluents. The vital agents are 1. such as support strength, comprising Nutrients; and 2. such as cause action; and these last operate, 1. "partially and temporarily," such as Expergefacients, which we cannot very clearly distinguish from Excitants, which follow, and Calefacients; Sudorifics, Errhines, Sialogogues, and the other evacuants, including also Carminatives, Epispastics, Suppuratories, Sorbefacients, and Astringents: and *b.* "producing permanent increase of action and of power," viz. Tonics; and *c.* "diminishing the power of action or of sensation," 1. *primarily*, as Narcotics (causing sleep), Sedatives (easing pain), Nauseants; and Diaphoretics; 2. *secondarily*, as Exhaurients. Among the sedatives, which, according to the definition, "ease pain, by diminishing the power of action or sensation," we were a little surprised to find the most powerful excitants, and calefacients, in nature; such as ether, ammonia, oil of turpentine and amber, wine, cinchona, asafœtida, nitrate of silver, camphor, and musk, together with hyoscyamus, digitalis, and tobacco. It would appear, that the former articles are but secondarily sedative, and should have been placed in the class of exhaurients.

On the whole, however, this department of the work is executed with considerable care, and is entitled to unqualified approbation; it constitutes, indeed, a highly valuable catalogue of the articles employed in medicine.

The volume is concluded by four papers; the first of which consists of Chemical Tables, of affinities and of the solubility of substances in water; the second is a sketch of Animal Chemistry, with remarks on the laws of chemical combinations, professedly taken from the works of Professor Berzelius; the third, is an essay on the measurement of minute particles, especially those of the blood and of pus; and the last, is an essay on the medical effects of climates, of moderate value.

On the whole, we cannot but wish that Dr Young had limited the design of his work to that of a bibliotheca, and that he had approximated in his plan more nearly to that of Ploucquet, both in the arrangement, and in the insertion of more numerous notices of the subjects and practical points of the works referred to. The same degree of labour, would have enabled the author to give a *select* bibliotheca, with all the advantages and void of the imperfections of that great work, and it would certainly have been received by his professional brethren with gratitude; while they will be unwilling to award their eulogia to his system of nosology, which imposes the task of learning a language, without any adequate benefit from its use. They would have been better satisfied, too, had Dr Young given more numerous criticisms from his own store of knowledge, and not borrowed so profusely the quaint, feeble, and often injudicious critiques of Rothe, who is obviously a man of more labour than judgment. At the same time, they cannot but be thankful to the author for the useful compilation with which his industry has now supplied them.

III.

History of James Mitchell, a Boy born Blind and Deaf, with an Account of the Operation performed for the recovery of his Sight. By JAMES WARDROP, F. R. S. Edinburgh. 4to. pp. 52. London, 1813.

The unfortunate youth, whose history we are about to lay before our readers, has been placed, by an almost unexampled infliction of Providence, at an immeasureable distance from his fellow-creatures. Deprived of the principal means of intercourse with the external world, he has been doomed to solitude and ignorance, and though evidently possessed of *capacity* for moral and intellectual improvement, he at present exists bereft in a great degree of the possibility of having this capacity cultivated except to a very limited extent.

"When brought to London, and put under my care," Mr Wardrop observes, "he had passed the fourteenth year of his age. He was accompanied by his father, a respectable clergyman in the north of Scotland, and by his sister; from whom, and from the observations I was enabled to make, the subsequent history has been collected.

"He had the usual appearances of strength and good health, and his countenance was extremely pleasing, and indicated a considerable deal of intelligence.

"On examining the state of his eyes, the pupil of each was observed to be obscured by a Cataract.

"In the right eye the cataract was of a white colour and pearly lustre, and appeared to pervade the whole of the crystalline lens. The pupil, however, readily dilated or contracted, according to the different degrees of light to which it was exposed. The cataract in the left eye was not equally opake; about one-third of it being dim and clouded, arising, as it appeared, from very thin dusky webs crossing it in various directions, the rest being of an opake white colour. The pupil of this eye did not, however, seem so susceptible of impressions from varieties in the intensity of light, as that of the other eye, nor did he employ this eye, so often as the other, to gratify his fondness for light.

"I could discover no defect in the organization of his Ears.

"Soon after his birth, his parents observed the cataracts in both eyes, and they also discovered, at a very early age, that he was Deaf, as no sounds appeared to excite his attention, and no noise seemed to awake him during sleep.

" About the time of life when he was attempting to walk, he began to be attracted by bright and dazzling colours, and to derive pleasure from striking his teeth with sonorous bodies. He also appeared anxious to smell and feel those substances which had become known to him through the medium of his other senses."

" He used to hold between his eye and luminous objects, such bodies as he had found to increase the quantity of light; and it was one of his chief amusements to concentrate the sun's rays, by means of pieces of glass, transparent pebbles, or similar substances, which he held between his eye and the light, and turned about in various directions. There were other modes by which he was often in the habit of gratifying his desire of light. He would go to any out-house or room within his reach, shut the windows and doors, and remain there for a considerable time, with his eyes fixed on some small hole or chink which admitted the sun's rays, eagerly catching them. He would also, during the winter nights, frequently retire to a corner of a dark room, and kindle a light for his amusement. Such, indeed, seemed to be the degree of pleasure, which he received from feasting his eyes with light, that he would often occupy himself, in this manner, for several hours, without interruption. In this, as well as in the gratification of other senses, his countenance and gestures displayed a most interesting avidity and curiosity."

" In his childhood, one of the most remarkable circumstances relating to him, was this eager desire to strike any hard substance against his teeth. He was particularly gratified when it was a key, or any instrument which produced a sharp sound; and he struck it always upon his front teeth. When a ring of keys was given to him, he seized them with great avidity, and tried each separately by suspending it loosely between two of his fingers, so as to allow it to vibrate freely; and after tingling them amongst his teeth, in this manner, he generally selected one from the others, the sound of which seemed to please him most. This, indeed, was one of his most favourite amusements, and it was surprising how long it would arrest his attention, and with what eagerness he would, on all occasions, renew it. A gentleman observing this circumstance, brought to him a musical snuff-box (a French trinket containing a small musical instrument, which played airs by means of a spring), and placed it between his teeth. This seemed not only to excite his wonder, but to afford him exquisite delight; and his father and sister, who were present, remarked, that they had never seen him so much interested on any former occasion. Whilst the instrument continued to play, he kept it closely between his teeth, and even when the notes were ended, he continued to hold the box to his mouth, and to examine it minutely with his fingers, his lips, and the point of his tongue, expressing, by his gestures and by his countenance, extreme curiosity.

" Besides the musical snuff-box, I procured for him a common *musical key*. When it was first applied to his tooth, he exhibited expressions of fear mixed with surprise. However, he soon perceived that it was attended with no harm, so that he not only allowed it to be renewed, but he soon acquired the habit of striking it on his own hand, so as to make it sound, and then touching his teeth with it. One day his father observed him place it upon the external ear. He has also, on some occasions, been observed to take notice of, and to appear uneasy with very lound sounds. Though, therefore, the teeth, besides being organs of mastication, and also serving as organs of touch in examining the food in the mouth, so that the hard and indigestible part may be rejected, in this boy they seemed to be the best channel of communicating sound to the auditory nerve.

"His organs of Touch, of Smell, and of Taste had all acquired a preternatural degree of acuteness, and appeared to have supplied, in an astonishing manner, the deficiencies in the senses of Seeing and Hearing. By those of Touch, and Smell in particular, he was in the habit of examining every thing within his reach. Large objects, such as the furniture of a room, he felt over with his fingers, whilst those which were more minute, and which excited more of his interest, he applied to his teeth, or touched with the point of his tongue. In exercising the sense of Touch, it was interesting to notice the delicate and precise manner by which he applied the extremities of his fingers, and with what ease and flexibility he would insinuate the point of his tongue into all the inequalities of the body under his examination.

"But there were many substances which he not only touched, but smelled during his examination.

"To the sense of Smell, he seemed chiefly indebted for his knowledge of different persons. He appeared to know his relations and intimate friends, by smelling them very slightly, and he at once detected strangers. It was difficult, however, to ascertain at what distance he could distinguish people by this sense; but, from what I was able to observe, he appeared to be able to do so at a considerable distance from the object. This was particularly striking when a person entered the room, as he seemed to be aware of this before he could derive information from any other sense, than that of smell.

"In selecting his food, he was always guided by his sense of smell; for he never took any thing into his mouth, without previously smelling it attentively.

"His Taste was extremely delicate, and he shewed a great predilection for some kinds of food, whilst there were others of which he never partook. He had on no occasion tasted butter, cheese, or any of the pulpy fruits; but he was fond of milk, plain dressed animal food, apples, peas, and other simple nutriment. He never took food from any one, but his parents or sister."

"Impressions transmitted to the human soul through the medium of *one* sense might call into being some of the most important operations of intellect. Facts have been given to prove, that this boy possessed both recollection and judgment. We are ignorant of the qualities of bodies which influenced his determinations and his affections.

tions. On all occasions, however, it was clear, that he made his experiments on the objects which he examined, with all the accuracy and caution that his circumscribed means of gaining intelligence could admit. The senses he enjoyed being thus disciplined, acquired a preternatural degree of acuteness, and must have furnished him with information respecting the qualities of many bodies, which we either overlook, or are in the habit of obtaining through other channels.

" Perhaps the most striking feature of the Boy's mind, was his avidity and curiosity to become acquainted with the different objects around him. When a person came into the room where he was, the moment he knew of his presence, he fearlessly went up to him, and touched him all over and smelled him with eagerness. He showed the same inquisitiveness, in becoming acquainted with every thing within the sphere of his observation, and was daily in the habit of exploring the objects around his father's abode. He had become familiar with all the most minute parts of the house and furniture, the out-houses, and several of the adjacent fields, and the various farming utensils.

" He showed great partiality to some animals, particularly to horses, and nothing seemed to give him more delight than to be put on one of their backs. When his father went out to ride, he was always the first to watch his return; and it was astonishing how he became warned of this, from remarking a variety of little incidents. His father putting on his boots, and such like occurrences, were all accurately observed by the boy, and led him to conclude how his father was to be employed. In the remote situation where he resided, male visitors were most frequent, and therefore the first thing he generally did, was to examine whether or not the stranger wore boots; if he did, he immediately quitted him, went to the lobby, found out, and accurately examined his whip, then proceeded to the stable and handled his horse, with great care, and the utmost attention. It occasionally happened, that visitors arrived in a carriage. He never failed to go to the place where the carriage stood, examined the whole of it with much anxiety, and amused himself with the elasticity of the springs.

" The locks of doors attracted much of his notice, and he seemed to derive great pleasure from turning the keys.

" He was very docile and obedient to his father and to his sister, who accompanied him to London, and reposed in them every confidence for his safety, and for the means of his subsistence."

" When a stranger approached him, he eagerly began to touch some part of his body, commonly taking hold of the arm, which he held near his nose, and after two or three strong inspirations, through the nostrils, he appeared to form a decided opinion regarding him. If this was favourable, he showed a disposition to become more intimate, examined more minutely his dress, and expressed by his countenance more or less satisfaction: but if it happened to be unfavourable,

able, he suddenly went off to a distance, with expressions of carelessness or of disgust.

"When he was first brought to my house, to have his eyes examined, he both touched and smelled several parts of my body, and the following day, whenever he found me near him, he grasped my arm, then smelled it, and immediately recognized me; which he signified to his father, by touching his eye-lids with the fingers of both hands, and imitating the examination of his eyes, which I had formerly made. I was very much struck with his behaviour during this examination. He held his head, and allowed his eyes to be touched, with an apparent interest and anxiety, as if he had been aware of the object of my occupation. On expressing to his father my surprise, at the apparent consciousness of the Boy of what was to be done, he said that he had frequently, during the voyage from Scotland, signified his expectation and his desire that some operation should be performed on his eyes. About two years before this period, he had been brought up to London by sea, with the hope of getting an attempt made to improve his sight and his hearing. The membrane of the tympanum, of both ears, was punctured by Mr Astley Cooper, with no benefit; and several medical gentlemen examined his eyes, and endeavoured to perform some operations on them. In this, however, they completely failed, from the powerful resistance which he made to all their efforts to secure him and hold the eye quiet. The lively remembrance, which he seemed to have, of these events, and the recurrence of the same circumstances attending his coming here at this time, made him very naturally conceive that his parents had again brought him from home, with the same view as formerly. During the first examination, and on several future ones, when I purposely handled the eye roughly, I was surprised to find him submit to every thing that was done with fortitude, and complete resignation; as if he was persuaded that he had an organ imperfectly developed, and an imperfection to be remedied by the assistance of his fellow-creatures.

"Many little incidents in his life have displayed a good deal of reasoning and observation. On one occasion a pair of shoes were given to him, which he found too small, and his mother put them aside into a closet. Some time afterwards young Mitchell found means to get the key of the closet, opened the door, and taking out the shoes, put them on a young man, his attendant, whom they fitted exactly.

"On another occasion, finding his sister's shoes very wet, he appeared uneasy until she changed them.

"From his father having had farm-servants, he attempted to imitate them in some of their employments, and was particularly fond of assisting them in cleaning the stable.

"At one time, when his brothers were employed making basket-work, he attempted to imitate them; but he did not seem to have patience to overcome the difficulties he had to surmount.

"In

hitherto been. This remark is made without the slightest intention of wounding the feelings of an ingenious and amiable young lady. She has done more than most people in her situation could have accomplished, and we only regret, that the utmost advantage had not been derived from her discovery *.

It may never be in the power of man to ascertain with accuracy the nature of the elementary and original perceptions conveyed exclusively to the mind by each individual sense; because the opportunities for observation are both few and unsatisfactory. We do not indeed believe, that the philosophy of character requires very great precision in this respect. The succession of impressions may be sufficiently marked, as well as the combinations which result from such impressions, without positively allotting to each sense its peculiar and exclusive share in the formation of intellectual phenomena. Here, we believe, experience fully establishes what philosophy teaches. The removal of a cataract does not at once invest the organ of vision with all its powers and properties, nor convey to the "mind's eye" a flood of light. Long and frequent discipline is required to train our senses to their perfect duties. This dicipline is obtained under circumstances where attention cannot be well excited, and therefore is unheeded. The most experienced eye, when suddenly introduced to a great assemblage of universal objects, is, for a time, incapable of analyzing the different parts of the spectacle, and reducing them to order. Every thing appears, at first, confused, and it is not till after patient and repeated examination that the intricacy is removed. What all men, more or less, experience in unravelling novel and complex impressions, must be felt by persons who have any of their senses suddenly restored, when applying their newly acquired power of perception to the examination of the most simple properties. The whole of infancy is passed in such examinations, and they differ not in their effects from the inquiries which we pursue in our maturer years. Without attempting to speculate upon the accidents and events which model individual characters, and give them their various attainments, it is a truth which admits not of contradiction, that the progress of intellect, and the due use and discipline of our organs of perception, are inseparably connected together. The impressions so received, produce very different effects in different individuals; but from their agency results the developement of our

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* In attributing this discovery to Miss Mitchell, we are not unacquainted with the observations of Sicard. As far as she is concerned, the plan was original.

our faculties, and ultimately the whole of the moral or intellectual excellence, of which our nature is susceptible.

These remarks are amply confirmed by the history of Mitchell. They are also well illustrated by another case which we have recently observed. A very few particulars respecting it, therefore, may not be misplaced here. This boy is about the age of thirteen. He was born blind. But the loss of his sight has not been his only misfortune. At an early age he was deprived of both his parents, and the greater part of his life has been spent in a parish work-house. There, his existence appears to have been purely animal. His few wants were supplied, but no attempts seem to have been made to excite his curiosity, or to communicate information. He had scarcely any language, and the words he knew referred merely to a few particular facts which he was compelled to observe, and their application extended not beyond the bounds of his own very limited experience.

An operation, after the plan recommended by the late Mr Saunders, was performed. He was thereby enabled to distinguish colours; but it was not till after repeated and very laborious experiments, that the colour and its name became completely associated together. Similar difficulty was encountered in teaching him to mark, by appropriate language, difference of shape, and even of magnitude. The import of the words roundness and squareness, for example, could not be conveyed to him, but by impressing angular and circular bodies strongly and frequently upon his sense of touch. Of time or distance he had no accurate notions. It is also worthy of remark, that the muscles which move the eyelids, and the eye itself, had been so little employed, that they had become almost involuntary. When desired to open the eye, he invariably at first had recourse to his finger, and instead of directing the eye itself to any object which he was surveying, he either moved his head, or the object, till it was brought to a proper point for observation.

The peculiarities dependent upon blindness, are certainly not the most interesting in this case. From an unhappy combination of circumstances, he has existed in a state of ignorance which is almost incredible; and, at an age when a considerable degree of information is generally obtained, he, in point of *physical* and *moral* acquirements, is not much superior to an infant. It has been peculiarly interesting to observe the developement of his faculties, in consequence of a more precise and regular use of his organs of perception, and his more extended acquaintance with the external world. Impressions which he had formerly received, but which had lain dormant and unapplied in his memory, begin to be called, as it were, into a new existence, to be compared with his more recent acquirements, and to afford him the means of making new arrangements and combinations. In consequence of this process, he has repeatedly and unexpectedly disclosed some facts connected with his previous habits and condition, which never could be obtained before, by the most assiduous and best contrived interrogatories. It would be wrong, in this place, to give a more detailed account of this lad. His progress has been well noted, and it may afterwards afford the subject of a separate communication.

Besides the memoir published by Mr Wardrop, another relative to Mitchell has been drawn up by Mr Stewart, and printed in the Transactions of the Royal Society of Edinburgh. Mr Wardrop, Dr Gordon, and other gentlemen, afforded him the materials for his interesting account.

The education of those who are deprived by nature of one or more of the most important channels of information, is not less interesting to the philosopher, than it is to those who are the objects of his care. Mr Stewart has, with laudable and humane feeling, dwelt at some length upon this subject, and has passed a high eulogium upon the merits of the plan said to be pursued by the Abbé Sicard. We cannot help feeling some degree of surprise, at the unqualified manner in which he has expressed his admiration of the deep philosophical principles which he thinks have guided the researches, and dictated the practical lessons of that author. From a natural desire to augment the value of his instructions, Sicard has probably been led, in his introduction, and other parts of his work, to give a picture of the minds of individuals who are born deaf, which unquestionably is not justified by common observation. It is contradicted by what we daily see of persons in that situation, who have not had the advantages of his system; and we are enabled to state, from an accurate knowledge of the success attending less complicated plans of tuition, that many of his minute details and metaphysical distinctions, are both unnecessary and inapplicable. Mr Stewart has implicitly adopted his account of Massieu. That account, there is reason to believe, is overcharged. Accomplished as this person undoubtedly is, it is proved, that he always shewed an observing and penetrating mind, and an almost invincible desire to obtain instruction, long before he fell under Sicard's care. The following quotation shews that he was not quite so savage as we have been taught to believe:

"Massieu voyoit les autres enfans aller à l'ecole. Il avoit grande envie d'apprendre à lire et à ecrire. Il pria son père de l'envoyer chez le maitre, son père le refusa, en lui disant, par signes, que cela etoit inutile, à cause de sa surdité. Massieu lui faisoit signe de déboucher ses oreilles comme on débouche un bouteille; voyant qu'il ne pouvoit rien obtenir de son père il dérobe un livre, et va de lui-meme à l'école. Le maitre l'en chasse impitoyablement. Massieu ressent une affliction profonde; il pleure amerement; il ouvre son livre; il le devore des yeux; il en parcourt les pages en remuant les levres, comme s'il eut prononcé les mots; il veut les ecrire, et il ne trace que des caractères insignificans. Il etoit alors agé de douze ans," &c. &c.

Vid. Considerations sur les Sourds-muet, de naissance, par U. R. T. Le Bouvyer Desmortiers, p. 255.

We hasten now, after these imperfect observations, to make known some of the facts connected with Mr Wardrop's operation on Mitchell, and its consequences.

"In the hope of restoring this Boy's sight," he observes, "my attention was solely directed to the removal of the cataract of the right eye. Having thought it preferable *to extract* the lens of that eye, and conceiving this might be accomplished by having him properly secured, I placed him on a table in a room lighted from the roof: and having secured him with skilful assistants, I attempted to introduce the cornea-knife; but the resistance which he made was such as to render it impracticable to use that instrument. He seemed to know that something was to be done to his eye, and he at first readily yielded, and allowed himself to be placed and held on the table. The uneasiness, however, which the pressure necessary to keep the eye-ball steady and the eye-lids open, seemed to overcome his resolution, and his exertions became so violent that it was quite impossible to secure even his head.

"A second attempt was made the day following, having previously taken more precautions in order to secure him; but so violent were his exertions and cries, and so irascible did he become, that all present were glad to relinquish their posts, and I was impressed with the conviction, that nothing but a powerful piece of machinery, calculated to grasp every joint of his body, would be at all sufficient to enable any operation to be performed. Some days having elapsed without the hope of being able to get the operation performed, I at last thought of a machine which completely answered the wished-for purpose, and which I may describe, as on a future occasion, under similar circumstances, it may be found useful. It consisted of a kind of box, long enough to contain all his body except the head. The sides were fixed on hinges, so that they might be folded in upon the body; it had no top part, and the bottom was long enough to reach sufficiently far beyond the sides at one extremity, so that a perpendicular plane of wood was fixed on it, in which there was a niche of such a size as accurately to contain the head. The machine being placed erect, and lined with a blanket, to prevent any risk of his being injured, he was easily secured in it by folding the sides on his body, and fixing them with circular ropes; and in this manner, notwithstanding a most powerful resistance and many harassing screams, he was placed on a table and kept quite steady. I had now given up all hopes of extracting the cataract, and determined to try *couching*, an operation which, though not generally so successful, was preferable in this case, as there was not so much danger of doing any essential injury to the eye, even if it did not succeed. Much difficulty was found in holding open the eye lids, and keeping the globe of the eye steady; but this was ultimately accomplished by Mr Ware, who was kind enough on this occasion to lend me his able assistance. As soon as the couching-needle touched the eye he remained quite steady, and his dreadful screaming ceased. I made use of the needle recommended by Mr Cheselden, and with its sharp edge cut through the anterior portion of the crystalline capsule, and with its point dragged the lens from the sphere of the pupil. On depressing the point of the needle the lens remained out of view, except a small portion of its inferior edge, so that I then withdrew the instrument. A small quantity of blood was effused in the anterior chamber. The operation being finished, he was liberated from the machine in which he was fixed. He then expressed great satisfaction, gazed around him, and appeared as if he could distinguish objects. This, however, could not be ascertained in a manner quite satisfactory, as it would have been prejudicial to his recovery to make any experiments; but it might be perceived from the change in the expression of his countenance. The eye, accordingly, being bound up, he was carried home, and put to bed in a dark room; after which he was bled in the arm."

"On the *fifth day* he got out of bed, and was brought into a room having an equal and moderate light. Before either touching or *seeming* to smell me he recognized me, which he expressed by the fear of something to be done to his eyes. He went about the room readily, and the appearance of his countenance was much altered, having acquired that look which indicated the enjoyment of vision. Indeed, before the operation he always walked with much freedom, and I had observed, that even on a very rugged and unequal road he did not stumble, or suffer in the least from jolting.

"He appeared well acquainted with the furniture of the room, having lived in it several days previous to the operation; and though, from placing things before him, he evidently distinguished and attempted to touch them, judging of their distances with tolerable accuracy, yet he seemed to trust little to the information given by the eye, and always turned away his head, while he carefully examined, by his sense of Touch, the whole surfaces of the bodies presented to him.

"On the *sixth day* he appeared stronger, amused himself a good deal with looking out at the window, and seemed to observe the carts and carriages which were passing in the street. On putting a shilling on the middle of a table he instantly touched it.

" On the *seventh day* the inflammation was nearly gone, and he observed a piece of white paper of the size of half a sixpence put upon the table. I took him into the street, and he appeared much interested in the busy scene around him, though at times he seemed frightened. A post supporting a scaffold at the distance of two or three yards chiefly attracted his notice, and he timorously approached it, groping, and stretching out his hand cautiously until he touched it

" He was at this time removed from his lodging to an uncle's house, who being a tailor, had a room full of various coloured cloths, which afforded young Mitchell an unceasing source of pleasure and amusement.

" He expressed a great desire for a suit of new clothes, and it was signified to him, that his wishes would be complied with ; and being allowed to make a choice, he selected from among the variety of colours a light yellow for his breeches, and a green colour for his coat and waistcoat. Accordingly, these were made, and as I solicited his father not to allow them to be put on until I was present, it was signified to him that he should have permission to wear them in two days. The mode by which he received this communication was by closing his eye-lids, and bending down his head twice, thereby expressing that he must first have two sleeps. One day after the clothes were finished, I called, and requested that he should be dressed in them. This was intimated to him by his uncle, touching his coat, and giving him a ring of keys, one of which opened the door of the room where the clothes were kept. He gladly grasped the keys, and in an instant pitched on the one he wanted, opened the door, and brought a bundle containing his new suit into the room where his father, uncle, sister, another gentleman and myself were sitting. With a joyful smile he loosened the bundle, and took out of the coat-pocket a pair of new white stockings, a pair of yellow gloves, and a pair of new shoes. The succeeding scene was, perhaps, one of the most extraordinary displays of sensual gratification which can well be conceived. He began by first trying his new shoes, after throwing away the old ones with great scorn, and then with a smiling countenance went to his father and to his sister, holding up to each of them and to me his feet in succession, that we might admire his treasure.

" He next put on the yellow gloves, and in like manner shewing them to his father and sister, they expressed their admiration by patting him on the head and shoulders. He afterwards sat down opposite to a window, stretched out on each knee an expanded hand, and seemed to contemplate the beauty of his gloves with a degree of gratification scarcely to be imagined. At one time I attempted to deceive him, by putting a yellow glove, very little soiled, in place of one of his new ones. But this he instantly dectected *as a trick*, and smiled, throwing away the old glove and demanding his new one. This occupation lasted a considerable time, after which he and his sister retired to another room, where he was dressed completely in his new suit. The expression of his countenance, on returning into the room in his gaudy uniform excited universal laughter, and every means were taken to flatter his vanity and increase his delight!

" Though the garments continued to occasion much delight, yet there were additional sources of enjoyment now laid open to him from his newly acquired powers of vision. One day I gave him a pair of green glasses to wear in order to lessen the influence of the bright sunshine on his eye, which remained still irritable. He looked through them at a number of objects in succession, and so great was his surprise, and so excessive his pleasure, that he burst into a loud fit of laughter. He continued to keep possession of the glasses, wearing which became one of his favourite amusements.

" He, in general, seemed much pleased with objects which were of a *white*, and still more particularly those of a *red* colour. I observed him one day take from his pocket a piece of red sealing-wax, which he appeared to have preserved for the beauty of its colour. A white waistcoat or white stockings pleased him exceedingly, and he always gave a marked preference to yellow gloves."

The following account was transmitted by his father from Scotland, in 1810, to Mr Wardrop;

" James seemed much amused with the shipping in the river, and until we passed Yarmouth Roads. During the rest of the passage we were so far out at sea that there was little to attract his notice, except the objects around him on deck. He appeared to feel no anxiety till we reached this coast, and observed land and a boat coming along-side of the vessel to carry some of the passengers on shore. He seemed then to express both anxiety and joy, and we had no sooner got into the river which led to the landing-place, than he observed, from the side of the boat, the sandy bottom, and was desirous to get out. When we got to land he appeared happy, and felt impatient to proceed homewards. On our arrival that evening, after a journey of seventeen or eighteen miles, he expressed great pleasure on meeting with his mother and the rest of the family. He made signs that his eye had been *operated* upon, that he also *saw* with it, and at the same time signified that he was fixed in a particular posture, alluding to the machine in which he had been secured during the operation. He has now learnt to feed himself, and to put on his own clothes. No particular object has yet attracted his attention in the way of amusement."

" A considerable time elapsed before any further accounts of young Mitchell reached me. I then learnt that his sight, instead of improving, as I had been led to hope, was impaired, from the opake crystalline lens not having been absorbed, and again covering the pupil; an accident by no means unusual after *couching* the cataract.

" Since that time, however, I have been informed that his sight has begun to improve, the fragments of the lens, and opake portion of its capsule are undergoing a gradual absorption, and enabling him to distinguish objects which are not very minute, and of a bright colour. From this sense, therefore, he is not enabled to acquire much additional information, and it still seems only to afford him the enjoyment of feasting his eyes with light, and with various colours.

" As he has advanced in life, his temper has become more irascible, he is less tractable; and he has all the signs of puberty. No circumstance in his history seems to show that he has any notion of difference in sex.

" The picture which I have attempted to delineate of this Boy's lamentable situation, whilst it must excite our sympathy, cannot fail at the same time to give rise to much philosophical speculation on one of the most interesting subjects which can engage the human understanding. It is a most wonderful and instructive experiment, instituted by *Nature* herself to illustrate the progress of human intellect, to mark the influence of the different organs of perception in the developement of its various faculties; thereby realizing what many philosophers have contemplated in imagination, but never before witnessed.

" The Boy is now in Scotland, and Professor Dugald Stewart, to whom I have communicated every circumstance of his case, is taking a lively interest in procuring some suitable provision, which might enable the Boy to be placed where an attempt could be made to educate him, and perhaps also to improve his sight by another operation. If this plan be executed under the immediate care and management of Mr Stewart, every thing will be done which can promote the happiness of this interesting youth, whilst science will reap the benefit of the observations of one of the most ingenious and most profound philosophers of the present day."

We most sincerely hope, that Mr Wardrop's benevolent wishes may be fully accomplished. The success of the first operation fully warrants the trial of another, and the age of the lad requires that it should be made without delay.

The copious extracts which we have made from Mr Wardrop's memoir, will enable our readers easily to appreciate its merits. It is composed in that simple unostentatious style which best suits subjects of this description; and, although he has purposely avoided all speculations, he has given a detail of facts which may be implicitly relied on, as affording a sure foundation for illustrating an interesting portion of the philosophy of our species.

IV.

Pharmacopœia Chirurgica; or a Manual of Chirurgical Pharmacy, comprising all the Valuable Formulæ of the New London Pharmacopœia, and of the several Pharmacopœias appertaining to this Branch of Science, with Notes and Observations, as well on the Method of Compounding, as likewise on the Properties and Use of each. By J. Wilson, Surgeon, Huntingdon, &c. &c. London, 1811. pp. 240.

As this work does not admit of analysis, we only notice it, to recommend it in the strongest manner to the general practitioner. It contains more original and practical observations, and fewer transcriptions from preceding authors, than any of the numerous publications on the same subject which have passed through our hands. The following article exhibits a fair example of the whole:

" CERATUM CALAMINÆ *(L.)—CALAMINE CERATE.*

" R Calaminæ præparatæ
Ceræ flavæ sing. lib. ss.
Olivæ olei O. j.

" The wax being cut into small pieces, and mixed with the oil, they are to be melted together over a slow fire, and when sufficiently cooled the calamine is to be stirred in, being previously reduced to a very fine powder. Notwithstanding the modus operandi of this cerate might give rise to some hypothetical, and perhaps unsatisfactory, discussion, it certainly is entitled to very considerable merit in certain cases, where the surface has been some time excoriated, the surrounding skin irritable, and the discharge thin, and in considerable quantity; more especially if the part so affected be immediately contiguous to bone, or there be little or no interposing muscular substance. As a proof of which I have frequently seen the cerate of calamine agree better with ulcers or abrasions situated upon the fore part of the tibia than any other application. As an external remedy to burns and scalds, after the pain and violence of the inflammation have been removed by suitable means, this cerate will often be exceedingly proper. It has sometimes proved serviceable in the ophthalmia tarsi, placed upon the edges of the eye-lids every night at bedtime by means of a camel's hair brush, in cases where more stimulating applications could not be borne: its efficacy, in this latter affection, may sometimes be increased by the addition of a little soft extract of opium, in the proportion of half a drachm, or even a drachm, of the opium to an ounce of the cerate."

PART

PART III.

MEDICAL INTELLIGENCE.

Report of the Diseases treated at the PUBLIC DISPENSARY, *(near Carey-Street,) London, from May* 31*st to Aug.* 31*st* 1813.

ACUTE DISEASES.

	No. of Cases.		No. of Cases.
Febris	19	Peripneumonia notha	1
Febris infant. remit.	20	Pertussis	14
Hydrocephalus	1	Scarlatina	1
Convulsio	1	Rubeola	6
Tetanus	1	Variola	7
Epistaxis	3	Erysipelas	2
Otalgia	3	Rheum. acutus	9
Cynanche tonsil.	8	Arthritis rheumat.	5
——— laryng.	1	Cholera	6
Catarrhus	55	Dysenteria	12
Peripneumonia	1	Abortus	6

CHRONIC DISEASES.

	No. of Cases.		No. of Cases.
Cephalæa and Vertigo	45	Diarrhœa	36
Hemicrania	1	Hæmorrhagia intestin.	1
Dysecœa	2	Hæmorrhois	4
Catarrhus chronicus	23	Peritonitis chronica	1
Dyspnœa	4	Physconia	2
Hæmoptysis	21	Marasmus	13
Phthisis	20	Enterodynia	18
Palpitatio	3	Nephralgia	14
Dyspepsia	24	Dysuria	1
Gastrodynia	22	Enuresis	1
Pyrosis	14	Menorrhagia	11
Hæmatemesis	2	Amenorrhœa	6
Hepatalgia	2	Dysmenorrhœa	1
Icterus	2	Leucorrhœa	20

CHRONIC DISEASES continued.

	No. of Cases.		No. of Cases.
Hysteralgia	2	Tympanites	1
Ascites	1	Struma	1
Anasarca	9	Lichen	8
Hydrothorax	2	——— syphiliticus	2
Hydrops. generalis	4	Erythema	2
Hemiplegia	7	Intertrigo	1
Tremor paralyt.	2	Lepra	1
Asthenia	29	Psoriasis	4
Paraplegia	2	Pityriasis	1
Lethargus	6	Prurigo	2
Epilepsia	1	Scabies	10
Chorea	1	Porrigo	12
Hysteria	4	Impetigo	3
Hypochondriasis	5	Ecthyma	4
Melancholia	1	Purpura	1
Tænia	1	Urticaria	5
Ascarides	1	Eczema	3
Lumbago	6	Rupia	1
Rheumat. chron.	31	Herpes	2
Nodositas	1	Aphthæ	1

The summer season, on the whole, has been cool, although two or three days of considerable heat occurred about the end of June, and again at the end of July. During the first six weeks of this quarter, there were frequent rains, and some thunder-storms; but since the middle of July, the weather has been almost uniformly dry, though of moderate temperature, in consequence of the prevalence of north and north-easterly winds, which rendered even the noontide shade cool, and the evening and morning air cold: hence each day may be said to have brought its vicissitudes, in the warmth of the meridian sun, and the chillness which succeeded its setting.

This diurnal alternation of warmth and cold, although it does not give rise to cholera, bilious vomiting, and the bilious synochus, which continued heat produces, nevertheless generally conduces to derangement of the alimentary canal, especially to dysentery and diarrhœa; and these are the more readily brought on, in consequence of the imperfect defence, which the summer clothing, adapted to the heat of noon, affords against the chills of evening. The number of cases of diarrhœa has been unusually great, affecting children as well as adults, and being indeed exceedingly severe in the former. To the same source, derangement of the chylopoetic viscera, may be ascribed the numerous cases of headache and vertigo, which were usually connected with constipation, or irregularity of the alvine excretions, and yielded to the continued action of gentle laxatives, united with absorbents and mild bitters. The derangements of the stomach, and especially that form of severe gastrodynia, both with and without the distressing symptom of pyrosis, which supervenes on taking food, and appears to be the result of an extreme irritability of the organ, which renders it incapable of bearing the ordinary distention, have been unusually numerous. This form of the disease is often obstinate; it seems, however, to be most speedily relieved by administering some narcotic, such as the hyoscyamus, together with a warm laxative, about half an hour previous to the principal meals; by which the stomach is prepared, by a diminished irritability and perhaps by an improved secretion, for the reception and disposal of the food. Sometimes alkalis and absorbents, even where there is no evidence of prevailing acidity, are advantageously combined with these remedies; and sometimes bitters, especially columba, appear to be more serviceable; but the narcotic and the laxative seem to be indispensable.

The case of tetanus occurred in a young woman, 16 years of age, of robust habit and highly sanguine temperament. It commenced about a week after she had slightly grazed her foot against a nail in the floor, an accident which she had nearly forgotten, until close inquiries led her to mention it. The trismus was at first accompanied by some swelling and inflammatory appearances of the integuments about the jaw and fauces, and the constitutional disturbance assumed a feverish character; spasmodic contractions in the muscles of the back and neck, soon ensued, and notwithstanding the copious administration of opium, and the use of purgatives, she died on the 5th day from the attack.

The patient affected with tape-worm affords an example of the active, though temporary success of the oil of turpentine in the destruction and expulsion of that troublesome parasite. This person has taken the medicine five or six successive times, and it has invariably expelled a considerable length of the worm, which of course implies that the expulsion has never been complete. By these operations, he has got rid of a prodigious quantity of tænia, to the extent of many yards in length, and has always experienced immediate relief, and regularly returned to the Dispensary to exhibit the trophies of his success in a bottle. After the expiration of a few months, his pains return, and he resorts to the Dispensary for the repetition of his dose, with confidence in its efficacy. Latterly he has taken only half an ounce, which appears to answer the purpose as effectually as the larger doses, and occasions less disturbance. In several instances, it is certain that two or three years have elapsed, without any recurrence of the symptoms indicative of the presence of the tænia, after the operation of the oil of turpentine; but even the certain temporary relief, which this individual experiences, exceeds that which any other remedy affords, and therefore stamps it with considerable value.

The case of purpura occurred in an elderly woman, of respectable appearance, who stated, that she had been accustomed to live very comfortably, but had nevertheless experienced a constant succession of purple blotches on the fore-arms, during the last ten years, although her general health remained unimpaired. About three months before she applied to the Dispensary, she had become sickly and feeble, and had suffered several large hæmorrhages from the nose, the purple blotches continuing as before. In consequence of a most extraordinary hardness and bounding of the pulse, which was also accelerated, venesection was ordered. One moderate bleeding softened the pulse, but it produced a very marked depression of muscular strength, which almost disabled her from attending the charity; she was then purged several times by means of calomel and jalap. The epistaxis never returned; but the vibices continue to appear on the arms, though somewhat less extensively, and she feels herself better from the use of the cathartics; yet her strength is considerably impaired. I have had an opportunity of witnessing the decided advantage of purgatives, in a severe case of petechial typhus, in the House of Recovery. This patient was a stout woman, and was brought into the House in the second week of typhus, unable to give any account of herself, and almost covered with petechiæ; the whole of the back part of the body and limbs was particularly loaded, so as to present nearly one continuous purple dye. She was delirious and perfectly confused, with a frequent and weak pulse, and a brown tongue; but this was moist, and the eyes were nearly free from suffusion. Three or four successive doses of calomel and jalap, at the interval of a day, with the intermediate use of sulphate of magnesia in infusion of roses, constituted the whole of the treatment, under which she daily improved, and soon recovered. T. B.

Bloomsbury-Square, August 31, 1813.

A Case of Intus-Susceptio, which terminated favourably, by the separation and discharge of the Cæcum, with a portion of the Colon and Mesocolon. By Mr J. M. Bowman, Ripon, Yorkshire.

A little girl, the daughter of Mr B. Horner, of White Lears near Ripon, 11 years of age, became affected, on the 20th of November, with pain, distraction and sense of oppression in the bowels;

with quick pulse, furred tongue, dry skin, and moderate thirst. A purgative and an enema were exhibited, and fomentations applied to the abdomen.

These and other medicines not having moved the bowels, a decoction of half a drachm of tobacco was given as an injection on the 22d. Syncope, but no alvine evacuation was induced; the pain was alleviated, the vomiting continued; the pulse was quick and feeble, thirst urgent, and the skin dry.

On the 23d, a purgative injection and internal purgatives were given, and the tobacco injection repeated. There was still no evacuation on the 24th. The abdomen was inflated, so as even to elevate the ribs. The pain was less severe, and the medicines remained on the stomach. On the 25th, there were hiccup and vomiting of feces, but no proper alvine discharge. Countenance ghastly; pulse quick and feeble, and every symptom of approaching dissolution. At 7 P. M. of this day, a portion of the colon, cæcum, and mesentery, measuring 13¼ inches, was passed by stool, with much black and fetid feculent matter, to the amount of 6 quarts.

On the 26th, the pulse was 95; thirst moderate; tongue furred; skin moist; appetite returning; abdomen free from pain.

From this period my little patient continued to recover gradually; the strength improved; the appetite returned; the pulse became natural, and the bowels regular. Some pain in the abdomen only remained, which however gradually and entirely ceased; and good health, in every respect, was at length restored.

The portion of colon, cæcum, and mesentery, are still in my possession, in a perfect state.

Skilgate, Ripon, Yorkshire, February 1, 1813.

On the Use of Oil of Turpentine, internally administered, in Epilepsies. By Edward Percival, M. D.

Sir,—The quarterly number of your valuable Journal, for July 1813, in which you have inserted a communication of mine, on the use of oil of turpentine, internally administered, in epilepsies, has just reached my hands. Since the date of that paper, I have been obliged by two interesting communications from Dr Latham of London, on the same subject. An obscure recollection of having met with some notice of the use of turpentine in epilepsy, in Dr Latham's treatise on Diabetes, was I believe the first, and the chief circumstance which induced me to make trial of that article of the materia medica, in so untractable a disorder. I have since referred to the passage in his work, and have found it more definite in the terms in which it is expressed than my general recollection had retained. The following is the paragraph to which I allude, as it stands near the close of his volume: "I should consider the diuretic effects of the rectified oil of turpentine as no hindrance to the use of it, or of any other resinous substance which circumstances might seem to demand in diabetes; any more than I should consider a similar effect upon the bladder, produced by a large dose of the same material, any hindrance to its use in cases of worms, which we now know it will almost to a certainty destroy, or in cases of epilepsy, which I have several times relieved, and more than once cured by the same remedy; and which was first given by me, under the impression that the irritable state of the nervous system, disposing to that very deplorable malady, might probably depend upon worms or foul bowels as a cause; but which, even independent of such a cause, may, I now think, be counteracted by a very large dose of that, or some such resinous substance, given so as to act everywhere powerfully, and at once upon the whole animal machine. The oil of amber in particular, is I think, upon the same principle, well adapted to similar indications."

This quotation must suffice with every reader, to give the claim of priority to Dr Latham (compared with myself), in the service of recommending the use of oil of turpentine in epilepsies. At the same time, I may acknowledge, that my recollection of the passage in his work just quoted, was so vague and general at the time of my adoption of the remedy, that in the mode in which I was induced to administer it, as well as in my views of the principle and method of its operation, I have borrowed nothing, even from that very respectable guide.

I shall esteem myself obliged by your subjoining to this statement, the publication of Dr Latham's letters, which accompany it. The papers to which he refers, and which are about to appear in the Transactions of the College of Physicians, were first made known to me by these communications.

For some time past I have been making extensive trials of the efficacy of turpentine in epilepsies of various kinds, and shall hope at no distant period to give to the public, through your Journal, further confirmation of its salutary effects.—I remain, Sir, yours &c.
Edw. Percival.

Dublin, September 2d, 1813.

To Dr Edward Percival, Dublin.

Sir,—I take the liberty of writing to you, in order to express my satisfaction at finding that your experience fully justifies the opinion which I had formed of the efficacy of turpentine in cases of epilepsy. So long ago as December 16th, 1809, I had given in a paper to the College of Physicians, " On the use of Oleum Terebinthinæ Rectificatum in worm cases;" and which was followed by another, " as an Appendix, April 4th, 1810, containing the case of a young lady, who was relieved from daily attacks of epilepsy, by the same remedy:" both of which were read at the College, on April 6th 1810: And another short paper confirming the observations of the last, by fresh experience of the good effects of turpentine in several epileptic cases, delivered to the College in June 1810. These papers not seeming sufficiently incorporated with each other, as to allow them to be published, were returned to me, and I had put them together under the date of April 20th, 1812; but from several verbal alterations which my son had made in them, I had not written them out afresh so as to fit them for presentation to the College. I merely mention these circumstances, to shew you that there cannot be a doubt about what you have advanced, and in no way to urge any claim respecting priority. For, although I might have felt a little mortified at first, that my occupations should, from time to time, have prevented me from completing my intentions, yet I assure you, that I am content that in any way the fact should have been brought before the public; and not the less so, that the person so publishing, should be the son of a gentleman, personally known to me when a resident in Manchester; and one too, whom, I believe, I had the pleasure of once meeting at Sir Lucas Pepys's at dinner, during whose presidency the papers above alluded to were delivered, and read to the College. In one or other of the two volumes of Medical Transactions, which are at last likely to be published by the College, my papers will probably be inserted; and I shall feel it my duty, at any rate, then to advert to your cases, without any attempt to dispute that pre-occupancy, to which I feel them justly to be entitled.—I have the honour to be, Sir, yours &c. J. LATHAM.

London, July 3d, 1813.

TO THE SAME.

DEAR SIR,—The very candid and explicit manner in which your letter is written, demands my immediate acknowledgment.

Since the publication of my book on Diabetes, to which you are pleased to say you were first indebted for the suggestion which led you to employ the oleum terebinthinæ rectificatum in epilepsy, occasional opportunities have occurred to me of confirming, by subsequent trials, my opinion of the efficacy of that remedy. I first gave the ol. terebinth. in epilepsy, under the common idea, that the disease, in the instance before me, might probably proceed from worms. The subject was a young lady brought to town for my advice, whom I saw only once. Her complaint was represented to have been of long duration. The epileptic paroxysms, one of which I witnessed to be of the severest kind, were said to return once or twice daily. I ordered that she should take a full fluid-ounce of ol. terebinthinæ, and requested to be informed of the condition of my patient at the expiration of a week. The account I then received, was, that the medicine had procured six copious evacuations, and that the fits had not recurred. No mention was made of any appearance of worms. In answer, I gave directions, that a like quantity of ol. terebinthinæ should again be administered upon any future attack. A second account informed me that the return of a slight paroxysm had induced a repetition of the remedy. From this time neither the young lady nor her friends ever again communicated with me on the subject, and my inquiries have failed in gaining any information concerning her. The ultimate result, therefore, of this case is unknown, but the effect of the remedy, as far as it was known, was obvious and satisfactory. The favourable impression thus left upon my mind, influenced my determination to employ the same remedy in similar cases. I have, therefore, since exhibited the oleum terebinthinæ rectificatum in several epileptic cases, in one or two with complete success, and in others with some advantage. In so deplorable a malady, any thing that in the slightest degree mitigates the paroxysm is commonly resorted to with avidity; but out of a given number of cases, if, in several, the fits which occurred daily have been put off for a time, and then have attacked the patient under a much milder form, and if, in one or two, a permanent cure has been experienced, I think the remedy that effects thus much, entitled to a favourable consideration.

I think, upon the whole, that your method of giving the oleum terebinthinæ is preferable to mine. I would, however, give the large dose unmixed, and all at once, in the first instance, and then keep up, by the smaller doses for a few successive days, that peculiar sensation of the head, which the larger doses seldom fail to produce, and which, as a fresh excitement arising from a fresh cause, may overcome that inexplicable condition of the nervous system, on which epilepsy may probably depend. This sensation, which I have thought peculiar, and which generally continues as long as the urine retains its violet smell, ought not to pass unobserved, because hence a proof is afforded that the oleum terebinthinæ exerts a sensible influence upon that organ which is esteemed the seat of epilepsy. I will not, however, venture to theorize upon a subject so intricate, being content to believe, that, in cases where there is not any morbid organization within the head itself, the oil of turpentine will be found a most useful medicine; and that, if the knowledge of the benefits already derived from it was more extensively promulgated, the experience of others might devise some more appropriate method, to which, possibly, with greater certainty, we might look for a cure.

I have not yet tried the effect of the oleum terebinthinæ in chorea, but the analogy that seems to exist between it and epilepsy would at least justify the experiment. I have hitherto been in the habit of employing one or two mercurial purges, and then have administered the tincture of digitalis in gradually increased doses, until the patient felt the usual affection of stupor in the head. As I have generally succeeded by this method of practice, I have not yet thought fit to deviate from it, but in proportion as the efficacy of the ol. terebinthinæ, as a remedy in epilepsy, is more fully ascertained, analogy will lead to its exhibition, not only in chorea, but in many other diseases which may appear to arise from irregular nervous excitement.—I have the honour to be, &c. J. Latham.

London, July 14, 1813.

On the 24th of June, the Senatus Academicus of the University of Edinburgh conferred the degree of Doctor in Medicine on the following gentlemen, after having gone through the appointed examinations, and publickly defended their respective inaugural dissertations:

Of Scotland.

John Symons,	*De Dyspepsia.*
Adam Macdougall,	*De Calore Animali.*
Robert Muter,	*De Hepatitide Chronica.*
William Macfarlane,	*De Dysenteria.*
George Traill Urquhart,	*De Dysenteria.*
Robert Lewins,	*De Profectu Medicinæ Practicæ a Culleni Temporibus.*
Robert Thin,	*De Cerebri Anatomia.*
James Kennedy,	*De Pneumonia.*
Ninian Hill,	*De Phrenitide Idiopathica.*
William Leslie,	*De Hepatitide.*
John Bowie,	*De Phthisi Pulmonali.*
George Watson,	*De Hirudine.*
James M. Arnot,	*De Apoplexia Phrenitica.*
Gilbert Sinclair,	*De Viribus Anthelminticis Geoffrææ inermis et Dolichi Prurientis.*
Murdoch Macleod,	*De Abscessu Lumbari.*
Donald M. Campbell,	*De Venenis Mineralibus.*
Thomas Dickson,	*De Artuum Excisione.*
Archibald Shanks,	*De Dysenteria.*

From England.

William Metford,	*De Febre Puerperarum.*
Hugh Ley,	*De Natura Intima Phthiseos Pulmonalis.*
George Henry Mellor,	*De Hepatitide Chronica.*
William Crane,	*De Gangliis Nervorum.*
John Arthington Payne,	*De Neuralgia.*
James Blundell,	*De Sensu quo Melos sentitur.*
Edward Wright,	*De Enteritide.*
James Leighton,	*De Mente Corporis Imperatrice.*
Thomas Stone,	*De Pneumonia.*
John Benny,	*De Phthisi Pulmonali.*

From Wales.

John Davies,	*De Mortis Veræ Indiciis.*
William Watkin Anwyl,	*De Arsenico.*

From Ireland.

William Gibney,	*De Cæli Calidi in Hominis Valetudinem Imperio.*
Charles Herbert Orpen	*De Anatomia Lusoria.*
Robert Murray,	*De Lue Venerea.*

From America.

James Colquhoun,	*De Inflammatione.*

From Jamaica.

David Mignot,	*De Cynanche Tracheali.*
John Anderson,	*De Febre Flava.*
William Dawson,	*De Hydrophobia.*

From St Croix.

Peter Sandberg,	*De Vitiis Cordis.*

From the Canary Islands.

Nicolas Betencourt,	*De Febre Epidemica.*

And, on the 13th of September, the same honour was conferred on the following Gentlemen:—

Of Scotland.

William Gairdner,	*De Dysenteria.*
Adam Hunter,	*De Apoplexia Sanguinea.*
Alexander Shannan,	*De Scarlatina Anginosa.*
Archibald Robertson,	*De Hydrothorace.*
James Alexander Oswald.	*De Hydrargyro.*
John Robertson,	*De Ophthalmia.*
David Macrorie,	*De Cæli et Anni Tempestatibus.*
William Henderson,	*De Effectibus Alkohol*
Robert Muir,	*De Phrenitide Idiopathica.*
James Duncanson,	*De Effectibus Cæli ac Caloris.*

From England.

John Conquest,	*De Rheumatismo.*
Richard Bright,	*De Erysipelate Contagioso.*

Stevenson Eden,	*De Hepatitide.*
Robert G. A. Collingwood,	*De Hydrope Anasarca.*
Joseph Dyneley,	*De Morbo quodam Periostei vel Ossium, usum hydrargyri nonnunquam sequente.*

From IRELAND.

John Gordon,	*De Morbo Vertebrarum.*
William Furlong,	*De Gastritide.*
John Browne,	*De Morbo Coxa.*
Thomas Farrell,	*De Cynanche Tracheali.*
George MacAdam,	*De Usu Plumbi externo.*
John Moorhead,	*De Theoriarum Physiologicarum certitudine.*

From JAMAICA.

Charles Mackglashan,	*De Pneumonia.*

From CANADA.

John Robertson,	*De Ophthalmia Membranarum.*

The Royal Medical Society of Edinburgh propose, as the subject of the Prize Essay for the year 1815, the following Question: "Is Azotic Gas absorbed in the lungs during respiration?—If it is not, whence do Herbiverous Animals derive their Azote."

A set of Books, or a Medal of Five Guineas value, shall be given to the author of the best dissertation on an experimental investigation of the subject proposed; for which all the members, honorary, extraordinary, and ordinary, are alone invited as candidates.

The dissertations are to be written in English, French, or Latin, and to be delivered to the Secretary on or before the 1st of December of the succeeding year to that in which the subjects are proposed, and the adjudication of the Prize shall take place in the last week of February following.

To each dissertation shall be prefixed a Motto, and this Motto is to be written on the outside of a sealed packet, containing the name of the author. No dissertations will be received with the author's name affixed; and all dissertations, except the successful one, will be returned, if desired, with the sealed packet unopened.

Medical Lectures in the University of EDINBURGH.

Dietetics, Materia Medica, and Pharmacy - - - - - -	Wednesday, Oct. 27.	8	Dr James Home
Practice of Physic - - -		9	Dr Gregory.
Chemistry & Chemical Pharmacy		10	Dr Hope.
Theory of Physic - - - -		11	Dr Duncan, sen.
Anatomy, Pathology and Surgery		1	Drs Monro.
Theory & Practice of Midwifery	Tu. Nov. 9. 3 o'clock.		Dr James Hamilton.

Military

Military Surgery - - -	Satur. Nov. 13. 2 o'clock.	Dr Thomson.
Medical Police - - -	Satur. Nov. 13. 11 o'clock.	Dr Duncan, jun.
Clinical Medicine - -	Tues. Nov. 9. 4. P. M.	Dr Rutherford. Dr Duncan, sen.
Clinical Surgery - -	Mon. Nov. 1. 5. P. M.	Mr Russel.

Practical Anatomy under the superintendence of Dr Monro, jun.

During the Summer Session, Lectures will be given on the following Branches of Education :—

Botany, by Dr Rutherford.
Midwifery, by Dr Hamilton.
Clinical Lectures on Medicine, Dr Duncan, sen.
Clinical Lectures on Surgery, by Mr Russel.
Medical Jurisprudence, by Dr Duncan, jun.

St George's Hospital, *and Great George Street, Hanover Square.*—In the first week of October will commence a course of Lectures on the Practice of Physic, Therapeutics, and Chemistry, at No. 9, Great George Street, Hanover Square. The medical lectures at eight, and the chemical at a quarter after nine o'clock; by George Pearson, M. D. F. R. S. &c. A register is kept of Dr Pearson's Cases in St George's Hospital, and an account is given of them every Saturday morning, at a clinical lecture, at nine o'clock.

Dr Clough will commence his Autumnal Course of Lectures on the Science and Practice of Midwifery, including the Diseases of Women and Infants, early in October next; in the Morning at half past Ten, and in the Evening at Seven, at 68, Berner's Street.

London Hospital.

Dr Buxton will commence the Autumnal Course of Lectures on the Practice of Medicine, on Monday, 4th October.

In the course of the present month will be published Practical Remarks on Diseases resembling Syphilis, with Cases. By John Whitsed, Surgeon, Peterborough, Member of the Royal College of Surgeons in London.

Dr Armstrong's paper was printed off before we received the following Note, which he wished to be inserted at the bottom of the last page.

"The reader will find some very judicious remarks on Curvature of the Spine, in John Burns's Dissertations on Inflammation, Vol. I. page 129.

"The opinion of the above ingenious author accords very nearly with my own."

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